

**PUBLIC HEALTH CERTIFICATE PROGRAM  
PREREQUISITE RECOMMENDATIONS**

MathPlanet.com is designed to read some short content first with written examples, then watch a short video example on the white board. Students should be able to skim through all the MathPlanet sections below in a few hours or less (1-4 hours maybe for all). I might suggest quick skimming for students who just want a quick refresher.

KhanAcademy.com the video is the primary focus in an interactive lecture style. There are also audio transcripts that students can follow along with the videos. KhanAcademy video lectures are longer, usually about 5 minutes each and have interactive quizzes that follow each section. KhanAcademy would benefit students who need more than just a quick refresher and want more of “learn for the first time.” KhanAcademy goes into more depth and is harder than MathPlanet.

**• PRE-ALGEBRA AND BASIC ALGEBRA**

1. <https://www.mathplanet.com/education/pre-algebra>
2. <https://www.mathplanet.com/education/algebra-1>
3. <https://www.khanacademy.org/math/pre-algebra>

**• FRACTIONS**

1. <https://www.khanacademy.org/math/pre-algebra/pre-algebra-fractions/pre-algebra-comparing-fractions/v/comparing-fractions>
2. <https://www.khanacademy.org/math/pre-algebra/pre-algebra-fractions/pre-algebra-mult-frac-word-probs/v/multiplying-fractions-word-problem>
3. <https://www.khanacademy.org/math/pre-algebra/pre-algebra-fractions/pre-algebra-dividing-fractions/v/conceptual-understanding-of-dividing-fractions-by-fractions>

**• GRAPHS, COORDINATE SYSTEM, SLOPE, INTERCEPT, SCATTERPLOTS**

1. <https://www.mathplanet.com/education/pre-algebra/introducing-algebra/coordinate-system-and-ordered-pairs>
2. <https://www.mathplanet.com/education/pre-algebra/graphing-and-functions/linear-equations-in-the-coordinate-plane>
3. <https://www.mathplanet.com/education/pre-algebra/graphing-and-functions/the-slope-of-a-linear-function>
4. <https://www.mathplanet.com/education/algebra-1/visualizing-linear-functions/the-coordinate-plane>
5. <https://www.mathplanet.com/education/algebra-1/visualizing-linear-functions/the-slope-of-a-linear-function>
6. <https://www.mathplanet.com/education/algebra-1/visualizing-linear-functions/the-slope-intercept-form-of-a-linear-equation>
7. <https://www.mathplanet.com/education/algebra-1/formulating-linear-equations/writing-linear-equations-using-the-slope-intercept-form>
8. <https://www.mathplanet.com/education/algebra-1/formulating-linear-equations/scatter-plots-and-linear-models>

**• INEQUALITIES**

1. <https://www.mathplanet.com/education/pre-algebra/introducing-algebra/inequalities>
2. <https://www.mathplanet.com/education/pre-algebra/inequalities-and-one-step-equations/solving->

- [inequalities](#)
- <https://www.mathplanet.com/education/pre-algebra/inequalities-and-one-step-equations/understanding-inequalities-and-equations>
  - <https://www.mathplanet.com/education/algebra-1/linear-inequalitites/solving-absolute-value-equations-and-inequalities>
- **ABSOLUTE VALUE**
    - <https://www.mathplanet.com/education/pre-algebra/explore-and-understand-integers/absolute-value>
    - <https://www.mathplanet.com/education/algebra-1/linear-inequalitites/solving-absolute-value-equations-and-inequalities>
    - <https://www.mathplanet.com/education/algebra-2/equations-and-inequalities/absolute-value>
    - <https://www.mathplanet.com/education/algebra-2/equations-and-inequalities/solve-inequalities>
    - <https://www.khanacademy.org/math/algebra-basics/basic-alg-foundations#alg-basics-absolute-value-new>
  - **EXPONENTS, SQUARE ROOTS, REAL NUMBERS, RADICAL EXPRESSIONS, LOGARITHMS**
    - <https://www.mathplanet.com/education/pre-algebra/discover-fractions-and-factors/powers-and-exponents>
    - <https://www.mathplanet.com/education/pre-algebra/right-triangles-and-algebra/square-roots-and-real-numbers>
    - <https://www.mathplanet.com/education/algebra-1/exploring-real-numbers/square-roots>
    - <https://www.mathplanet.com/education/algebra-1/exponents-and-exponential-functions/properties-of-exponents>
    - <https://www.mathplanet.com/education/algebra-1/radical-expressions/simplify-radical-expressions>
    - <https://www.mathplanet.com/education/algebra-2/polynomials-and-radical-expressions/simplify-expressions>
    - <https://www.mathplanet.com/education/algebra-2/exponential-and-logarithmic-functions> (all sections of this module)
    - <https://www.khanacademy.org/math/pre-algebra/pre-algebra-exponents-radicals> (almost all sections of this module)
    - <https://www.khanacademy.org/math/algebra-basics/basic-alg-foundations#alg-basics-exponents>
    - <https://www.khanacademy.org/math/algebra-basics/alg-basics-expressions-with-exponents#alg-basics-exponent-properties-intro>
    - <https://www.khanacademy.org/math/algebra-basics/basic-alg-foundations#alg-basics-roots>
    - <https://www.khanacademy.org/math/algebra2/x2ec2f6f830c9fb89:logs>
  - **SOLVING EQUATIONS**
    - <https://www.mathplanet.com/education/pre-algebra/more-about-equation-and-inequalities/fundamentals-in-solving-equations-in-one-or-more-steps>
    - <https://www.khanacademy.org/math/pre-algebra/pre-algebra-equations-expressions/pre-algebra-alg-expression-word-problems/v/writing-basic-expressions-from-word-problems-examples>
  - **SOLVING FOR RATIOS, RATES, PERCENTAGES**
    - How to solve for X if told  
X is 60% of A  
B is X% of A
    - <https://www.mathplanet.com/education/pre-algebra/ratios-and-percent/rates-and-ratios>
    - <https://www.mathplanet.com/education/pre-algebra/ratios-and-percent/proportions-and-percent>
    - <https://www.mathplanet.com/education/pre-algebra/ratios-and-percent/solving-problems-with-percent>
    - <https://www.mathplanet.com/education/algebra-1/how-to-solve-linear-equations/ratios-and-proportions-and-how-to-solve-them>
    - <https://www.mathplanet.com/education/algebra-1/how-to-solve-linear-equations/calculating-with-percents>

7. <https://www.khanacademy.org/math/pre-algebra/pre-algebra-ratios-rates> (almost all sections in this module)
- **CONVERTING UNITS**
  1. <https://www.khanacademy.org/math/algebra/x2f8bb11595b61c86:working-units>
- **COMPOSING EQUATIONS, ESPECIALLY FROM WORD PROBLEMS**
  1. <https://www.mathplanet.com/education/algebra-1/discovering-expressions,-equations-and-functions> (all sections and subsections of this module)
- **CREATING AND INTERPRETING GRAPHS FROM DATA**
  1. <https://www.khanacademy.org/math/pre-algebra/pre-algebra-math-reasoning> (all sections on bar graphs and histograms)

PHC202 will teach and cover most of these topics in detail, but it may benefit students who have never taken a statistics course before, those who have not taken statistics in many years, or students who want to be more confident with math and statistics skills and to see this material if only just a preview.

- <https://www.mathplanet.com/education/pre-algebra/probability-and-statistic>
- **MEAN, MEDIAN, MODE**
  - <https://www.mathplanet.com/education/pre-algebra/probability-and-statistic/the-mean-the-median-and-the-mode>
- **VARIANCE, STANDARD DEVIATION**
  - <https://www.mathplanet.com/education/algebra-2/quadratic-functions-and-inequalities/standard-deviation-and-normal-distribution>
- **NUMBER OF POSSIBLE OUTCOMES, ENUMERATION, COUNTING PRINCIPLE**
  - <https://www.mathplanet.com/education/pre-algebra/probability-and-statistic/calculating-the-outcome>
  - <https://www.mathplanet.com/education/algebra-2/discrete-mathematics-and-probability/counting-principle>
- **COMBINATIONS AND PERMUTATIONS**
  - <https://www.mathplanet.com/education/pre-algebra/probability-and-statistic/combinations-and-permutations>
  - <https://www.mathplanet.com/education/algebra-2/discrete-mathematics-and-probability/permutations-and-combinations>
- **ODDS, ODDS RATIOS, DIFFERENCE BETWEEN ODDS AND ODDS RATIOS**
  - <https://www.mathplanet.com/education/pre-algebra/probability-and-statistic/finding-the-odds>
- **BASIC PROBABILITIES**
  - <https://www.mathplanet.com/education/pre-algebra/probability-and-statistic/probability-of-events>
  - <https://www.mathplanet.com/education/algebra-2/discrete-mathematics-and-probability/probabilities>
- **NORMAL DISTRIBUTION**
  - <https://www.mathplanet.com/education/algebra-2/quadratic-functions-and-inequalities/standard-deviation-and-normal-distribution>

Students who want a much more detailed preview or an ancillary resource to use along with the entire PHC202 course that will cover almost all of the same topics and in nearly the same level of detail could take the entire Khan Academy Statistics and Probability course.

- <https://www.khanacademy.org/math/statistics-probability>