

# PCAT Facts

- The PCAT can be taken up to 5 times without dilemmas
- If one must take the PCAT more than 5 times, restrictions may be placed on subsequent registration (supported documentation during and for registration may be required)
- The PCAT is administered by Pearson VUE
- Each school sets their own policies and standards regarding a passing PCAT score
- The PCAT testing time is 220 minutes
- The PCAT consists of:
  - 192 multiple choice questions
  - 1 writing prompt
- The PCAT Subtests include:
  - Writing
    - Health Issues
    - Science Issues
    - Social, Cultural or Political Issues
  - Biological Process
    - Human Anatomy and Physiology
      - Structure
        - Cells
        - Tissues
        - Organs
      - Systems

- Skeletal/Muscular/Nervous
  - Circulatory/Respiratory
  - Excretory/Digestive
  - Endocrine/Reproductive
  - Integumentary/Immune
- General Biology
  - Cellular and Molecular Biology
    - Structure and function of cells
    - Gene expression
    - Cell division and growth
    - Energy transformations
    - Metabolism
  - Diversity of Life Forms (Genetics)
- Microbiology
  - Microorganisms
  - Infectious Diseases and Prevention
  - Microbial Ecology
  - Medical Microbiology
  - Immunity
  - Health
    - Nutrition
    - Drugs
    - Diseases

- Critical Reading
  - Analysis
    - Relationships Between Ideas
    - Author's Purpose
    - Author's Tone
    - Facts/Opinions
    - Rhetorical Strategies
  - Comprehension
    - Words in Context
    - Main Ideas
    - Supporting Details
    - Drawing Conclusions
  - Evaluation
    - Bias
    - Support in an Argument
    - Author's Conclusion/Thesis
- Quantitative Reasoning (Mathematics)
  - Probability and Statistics
    - Measures of Central Tendency
    - Variation
    - Graphical
    - Probability
    - Statistical Concepts

- Basic Math
  - Fractions, Percentages & Decimals
  - Unit Conversions
  - Log Base 10
- Algebra
  - Expressions, Equations & Inequalities
    - Evaluate algebraic expressions for given values
    - Represent verbal quantitative situations as algebraic expressions or equations
    - Solve problems using:
      - Linear equations and inequalities
      - Equations and inequalities involving absolute value
      - Equations and inequalities involving rational expressions
    - Solve quadratic equations and inequalities
    - Solve equations and inequalities involving 1 or 2 radicals
    - Solve systems of equations or inequalities involving 2 or 3 variables
  - Functions
    - Perform algebraic operations on functions
    - Determine:
      - Compositions of functions
      - Inverses of functions

- Maximum and minimum points (must also use)
- Precalculus
  - Functions
    - Graph and identify domains, ranges, intercepts and zeroes of exponential functions
    - Logarithms
    - Solve problems related to exponential and logarithmic functions
    - Graph and identify domains, ranges, intercepts, zeros and inverses of the circular functions
    - Perform algebraic operations on functions
    - Identify and use composite functions
  - Complex Numbers
  - Vectors
    - Graphically and algebraically add vectors
    - Perform scalar multiplications
    - Represent and/or recognize vector equations of lines and planes
- Calculus
  - Limits
  - Continuity
  - Derivatives

- Find derivatives of algebraic functions by means of sum and product, Power Rule and/or Mean Value Theorem
- Use the Chain Rule to find derivatives of composite functions
- Solve problems by differentiation (velocity and accelerations)
- Use and/or interpret derivative tests to find extrema, points of inflection, intervals etc.
- Interpret and/or use the derivatives of circular functions and their inverses
- Interpret and/or use the derivatives of transcendental functions
- Determine the derivatives of composite functions involving the circular and transcendental functions
- Use implicit differentiation
- Determine related rates
- Integrals
  - Find antiderivatives and interpret C
  - Understand and use sigma notation for simplifying sums
  - Approximate areas bounded by curves
- Integration
  - Chemical Processes
    - General Chemistry

- Atomic
  - Structure
  - Ions
  - Periodicity
- Chemical Bonding
  - Nomenclature/Formulas
  - Bonding
- Reactions and Reaction Mechanisms
  - Types of reactions
  - Balancing equations
  - Equilibrium
  - Stoichiometry
- Kinetic Theory
  - States of matter
  - Gas laws
  - Causes and effects of changes in states
- Solutions
  - Concentration (pH)
  - Solubility
  - Acid-base theories
- Nuclear Chemistry (Radioisotopes)
- Organic Chemistry
  - Structure and Properties

- Structural formulas and bonding
  - Properties of organic compounds
- Reactions of Organic Compounds
  - Oxidation-reduction reactions
  - Hydrations and dehydration
  - Hydrolysis
  - Addition/Substitution/Elimination
- Basic Biochemistry Processes
  - DNA & RNA
  - Lipids
  - Proteins