

Course Description:

This course provides a comprehensive mathematics foundation aligned with international standards including the Common Core (USA), GCSE (UK), and IB frameworks. It develops analytical thinking, problem-solving skills, and exam readiness for both local and global assessments.

Target Audience:

- Secondary school students (Grade 7–12 / Year 8–13)
- WAEC, JAMB, GCSE, SAT, and IGCSE candidates
- Students preparing for international exams
- Learners aiming for STEM careers globally

Learning Outcomes:

- Demonstrate proficiency in algebra, geometry, and statistics
- Solve real-world and exam-based mathematical problems
- Interpret graphs, data, and mathematical models
- Apply logical reasoning and critical thinking
- Meet international math competency benchmarks

Course Modules:

Module 1: Number & Quantity

- Rational & irrational numbers
- Indices and standard form
- Fractions, decimals, percentages
- Ratio and proportion

Module 2: Algebra & Expressions

- Algebraic manipulation
- Linear equations and inequalities
- Simultaneous equations
- Quadratic equations

Module 3: Functions & Graphs

- Function notation
- Linear, quadratic, exponential functions
- Graph transformations
- Real-life modeling

Module 4: Geometry & Mensuration

- Angles, triangles, polygons
- Circle theorems
- Perimeter, area, volume
- Coordinate geometry

Module 5: Statistics

- Data representation
- Mean, median, mode
- Standard deviation (intro)
- Data interpretation

Module 6: Probability

- Basic probability rules
- Conditional probability (intro)
- Tree diagrams and Venn diagrams

Module 7: Trigonometry

- Trigonometric ratios
- Unit circle basics
- Angles of elevation/depression
- Applications

Module 8: Pre-Calculus & Advanced Topics

- Sequences and series
- Exponential and logarithmic functions
- Introduction to limits

Module 9: Exam Preparation

- WAEC, JAMB, GCSE, SAT past questions
- Time management strategies
- Mock tests

Assessment:

- Assignments
- Timed tests

Instructor:

First-Class Mathematics Graduate (CGPA: 4.56/5.0) with 5+ years teaching experience.