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| **IG Extended Mathematics course outline** | | | | | |
| Unit | Title | Specification code | Key contents | Duration | Assessment |
| 1 | Numbers and Algebra 1 | 3.1.1 ~ 3.1.3  3.2.1& 3.2.3 | * Calculations 1 * Fractions, decimals & percentages * Measures & Accuracy * Factors, powers & roots * Calculations 2 * Expressions * Formulae & Functions * Equations & Inequalities (Content extending to AS) | 2 weeks | * Homework |
| 2 | Algebra 2 & Intro to Calculus | 3.2.2 & 3.2.4 | * Graphs 1 (Content extending to AS) * Sequences * Units & Proportionality * Differentiation (Content extending to AS) | 2 weeks | * Topic test 1 * Homework |
| 3 | Geometry & Measures 1 | 3.3.1&3.3.2 | * Angles & Polygons * Working in 2D * Circles & constructions * Working in 3D | 1 week | * Homework |
| 4 | Geometry & Measures 2 &  Probability & Statistics | 3.3.3 & 3.4.1 ~ 3.4.3 | * Pythagoras, Trigonometry, Vectors & Matrices * Ratio & Proportion * Probability (Content extending to AS) * Probability of combined events * Handling data (1&2) | 1 week | * Quiz 1 |
| 5 | Revision & Mock |  | One round of Mock exam. Past papers (P1 & P2) will be used for practice and to test students’ understanding and knowledge in order to prepare for the official exam. | 1 week | * Mock Exam (Mid-term) |
| After IG official test and cycling trip, continue with AS content | | | | | |
| 6 | Pure math 1 (1) | P1.1  P1.2  P1.3 | * Surds * Quadratic * Transformations * Polynomials * Coordinate geometry * Differentiation | 4 weeks | * Quiz 2 * Final |
| 7 | Pure math 1 (2) | P1.4  P1.5 | * Integration * Sequence and series | 2 Weeks | * Quiz 3 |
| 8 | Pure math 2 | PP1.1  PP1.2  PP1.3 | * Trigonometry * Circle * Exponential and logarithms | 4 weeks | * Quiz 4 * Topic Test 2 |
| 9 | Statistics | S1.1  S1.2  S1.3 | * Further probability * Discrete random variables * Bernoulli and binomial distributions | 4 weeks | * Homework (M1.1-M1.4) |
| 10 | Mechanics | M1.1  M1.2  M1.3  M1.4 | * Motion in a straight line with constant acceleration * Motion in a straight line with variable acceleration * Force and Newton’s Laws * Momentum and impulse (Restricted to motion in a straight line) | 4 weeks | * Homework |
| 11 | Revision & Mock |  | Review all concepts by topics and practice all past papers and help students get ready for the official exam. | 1 week | Revision and Mocks |