Bellerive FCJ Catholic College

Department: Maths **Year Group: 12**

Term	Learning Focus	Key Knowledge and Skills	Assessment	Challenge and Enrichment
HT1	Pure 1 • Ch.1 Algebra & Functions • Ch.2 Quadratics • Ch.3 Equations & Inequalities • Ch.4 Graphs & Transformations • Ch.5 Straight Lines • Ch.6 Circles	Manipulate algebraic expressions and functions; solve quadratic and simultaneous equations; use inequalities; sketch and transform standard functions; apply coordinate geometry to lines and circles.	End of chapter assessment homeworks; LP assessments in line with A-Level Calendar	Maths Genie Pure Year 1 Pearson ActiveLearn video walkthroughs; MEI A-level problem solving tasks Dr Frost Maths Functions/Graphs videos
HT2	Pure 1 • Ch.7 Binomial Expansion • Ch.8 Trigonometry • Ch.9 Differentiation • Ch.10 Integration	Expand binomial expressions; use trig identities and radians; differentiate and integrate polynomials and simple functions; find gradients, tangents, areas.	End of chapter assessment homeworks; LP assessments in line with A-Level Calendar	Maths Genie Binomial/Trig/Calc https://mathsgenie.co.uk/alevel.html; Pearson video worked examples; Integral Maths enrichment problems (https://integralmaths.org)
HT3	Pure 1 • Ch.11 Exponentials & Logarithms • Ch.12 Vectors (2-D) Applied 1 • Statistics S1 Data Representation, S2 Measures • Mechanics M1 Quantities & Units, M2 Kinematics,	Apply laws of logs to solve equations; model growth and decay; use vectors for magnitude, direction and geometric problems.	End of chapter assessment homeworks; LP assessments in line with A-Level Calendar	Maths Genie Exponentials/Logs/Vectors https://mathsgenie.co.uk/alevel.html; Pearson ActiveLearn topic tests; AMSP Vectors in Context problems
HT4	Applied 1 • S3 Probability, S4 Binomial Distribution, S5 Hypothesis Testing • Mechanics M3 Forces & Newton's Laws, M4 Forces & Motion, M5 Moments	Represent and summarise data; calculate measures of location and spread; apply probability laws; model discrete random variables and perform binomial tests; describe and model constant-acceleration motion; apply Newton's laws and moments.	End of chapter assessment homeworks; LP assessments in line with A-Level Calendar	Maths Genie Stats/Mechanics https://mathsgenie.co.uk/alevel.html; Pearson/Edexcel exam practice booklets; Physics Online Mechanics videos (https://www.youtube.com/@PhysicsOnline)
HT5	Pure 2 • Ch.1 Algebraic Methods • Ch.2 Functions & Graphs • Ch.3 Sequences & Series • Ch.4 Trigonometry II	Use partial fractions and advanced algebraic proof; analyse inverse, composite and modulus functions; work with arithmetic/geometric series; use compound/double-angle identities and small-angle approximations.	End of chapter assessment homeworks; LP assessments in line with A-Level Calendar	Maths Genie Year 2 Algebra & Trig https://mathsgenie.co.uk/alevel.html; Pearson ActiveLearn worked solutions; MEI Deeper Maths sequences tasks
HT6	Pure 2 • Ch.5 Differentiation II • Ch.6 Integration II	Differentiate using product, quotient and chain rules; implicit and parametric differentiation; integrate using substitution and parts; solve simple differential equations.	End of chapter assessment homeworks; LP assessments in line with A-Level Calendar	Maths Genie Differentiation/Integration II https://mathsgenie.co.uk/alevel.html; Dr Frost Advanced Calculus playlist; NRICH advanced calculus problems