THOMAS ALLEYNE`S HIGH SCHOOL
Level 2 Certificate in Further Mathematics
LEARNING JOURNEY

Other parts of the Level 2 syllabus are covered within the GCSE course, but revision of Level 2 type questions will be required. Topics include:
Product rule for counting, surds, ratio problems, algebraic fractions, changing the subject of a formula, completing the square, inequalities, proof, trigonometry and circle theorems.

Functions – including inverse and composite functions and domain and range

Sixth - Form

POST-16 PATHWAY

Final Exam

Revision

Functions

Equation of circle

College / Apprenticeships

Coordinate geometry with equation of circle with centre not at the origin.

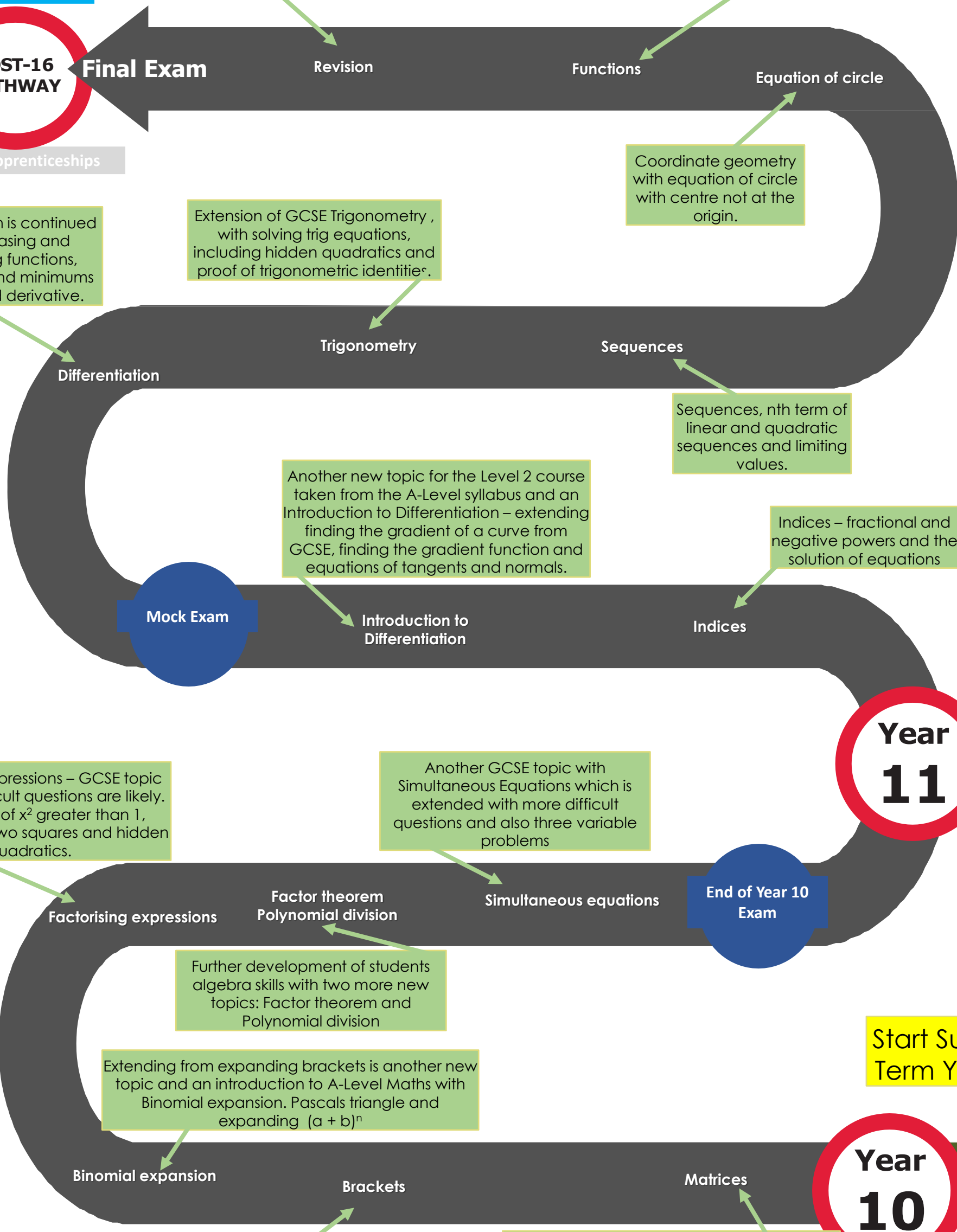Differentiation is continued with increasing and decreasing functions, maximums and minimums and second derivative.

Extension of GCSE Trigonometry, with solving trig equations, including hidden quadratics and proof of trigonometric identities.

Trigonometry

Sequences

Differentiation

Sequences, nth term of linear and quadratic sequences and limiting values.

Another new topic for the Level 2 course taken from the A-Level syllabus and an Introduction to Differentiation – extending finding the gradient of a curve from GCSE, finding the gradient function and equations of tangents and normals.

Indices – fractional and negative powers and the solution of equations

Mock Exam

Introduction to Differentiation

Indices

Year 11

Factorising expressions – GCSE topic but more difficult questions are likely. Coefficient of x^2 greater than 1, difference of two squares and hidden quadratics.

Another GCSE topic with Simultaneous Equations which is extended with more difficult questions and also three variable problems

Factorising expressions

Factor theorem Polynomial division

Simultaneous equations

End of Year 10 Exam

Further development of students algebra skills with two more new topics: Factor theorem and Polynomial division

Start Summer Term Year 10

Extending from expanding brackets is another new topic and an introduction to A-Level Maths with Binomial expansion. Pascals triangle and expanding $(a + b)^n$

Binomial expansion

Brackets

Matrices

Year 10

GCSE Mathematics

Expanding brackets. Including three brackets and two brackets with three or more terms.

Students begin the L2 certificate in Further Mathematics course with Matrices. A brand new and different topic to any on the GCSE course. Addition, subtract and multiplication of matrices, the identity matrix and transformations.