

ADDITIONAL MATHEMATICS

SECONDARY 2 EXPRESS STREAMING 2023

MATHEMATICS DEPARTMENT

INFORMATION ON THE ADDITIONAL MATHEMATICS SYLLABUS (4049)

- caters to students who have an aptitude and interest in Mathematics,
- prepares students adequately for A-Level H2 Mathematics, where a **strong foundation** in **Algebraic Manipulation** skills and **Mathematical Reasoning** skills are required,
- assumes knowledge of O-Level Mathematics

CONCEPTUAL UNDERSTANDING and SKILLS PROFICIENCY in these 3 Content Strands and Skills

ALGEBRA

GEOMETRY
&
TRIGONOMETRY

CALCULUS

LEARNING EXPERIENCES and SKILLS embedded with:

- PROCESSES (reasoning, communication and application in the use of model)
- METACOGNITION
- ATTITUDES

FIND OUT MORE!

To know more about the assessment objective and weightings and content assessed, access the SEAB Syllabus by scanning this QR Code or type in the link below.


<https://tinyurl.com/2023SEAB4049>

LOWER SECONDARY SKILLS/CONCEPTS REQUIRED

TO HELP STUDENTS MANAGE THE RIGOUR OF

ADDITIONAL MATHEMATICS

A Strong Foundation and Proficiency in **ALGEBRA** is required!

ALGEBRA STRAND

Quadratic Functions	Secondary 1 Topics: • Basic Algebra and Algebraic Manipulation
Equations & Inequalities	• Linear Equations and Simple Inequalities
Surds	Secondary 2 Topics: • Linear Graphs and Simultaneous Linear Equations
Polynomials & Partial Fractions	• Expansion and Factorisation of Quadratic Expressions
Binomial Expansions	• Further Expansion and Factorisation of Algebraic Expressions
Exponential and Logarithmic Functions	• Quadratic Equations and Graphs • Algebraic Fractions and Formulae

GEOMETRY AND TRIGONOMETRY STRAND

Trigonometric Functions, Identities and Equations	Secondary 1 Topics: • Basic Algebra and Algebraic Manipulation • Linear Equations and Simple Inequalities
Coordinate Geometry in two dimensions	Secondary 2 Topics: • Trigonometric Ratios • Pythagoras' Theorem
Proofs in Plane Geometry	Secondary 2 Topic: • Linear Graphs
	Secondary 1 Topics: • Basic Geometry • Triangles, Quadrilaterals and Polygons

CALCULUS STRAND

Differentiation and Integration	Secondary 1 Topics: • Basic Algebra and Algebraic Manipulation • Rate
	Secondary 2 Topics: • Expansion and Factorisation of Quadratic Expressions • Further Expansion and Factorisation of Algebraic Expressions • Algebraic Fractions and Formulae

SPECIMEN PAPERS

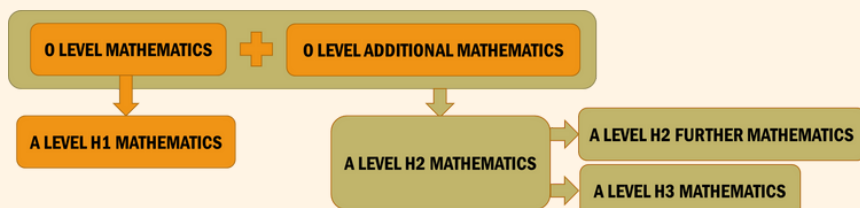
There is a shift from the routine types of questions that were mainly procedural in National Exams to application types. The Specimen Papers allow a glimpse into the new types of questions asked. Access the sites:

<https://tinyurl.com/4049P1>
<https://tinyurl.com/4049P2>

COMMON FAQS

1. Is Additional Math a requirement for JC?

Add Math can be considered as one of the L1R5 subjects for admission to JCs. In JC there are 3 different levels of Math: H1 Math, H2 Math, H2 Further Math and H3 Math.



2. Is Additional Math a requirement for Poly?

Add Math can be included as one of two Relevant Subjects for ELR2B2 for Poly Courses under the Aggregate Types ELR2B2-B, C and D. It is **not** compulsory for all Poly Courses, including Engineering courses.

LOCATE MORE INFORMATION ON CRITERIA TO ENTER JC, POLY AND INFO ON POST-SEC HERE!

<https://tinyurl.com/JAE2023MOE>

Go to Section 5 (Page 27 onwards) to read more on L1R5, ELR2B2 and find out about the different Post-Sec institutions from Section 6 (Page 31 onwards)

