

ADDITIONAL MATHEMATICS

SECONDARY 2 N(A) STREAMING 2023

MATHEMATICS DEPARTMENT

INFORMATION ON THE ADDITIONAL MATHEMATICS SYLLABUS (4051)

- caters to students who have an aptitude and interest in Mathematics
- prepares students adequately for O-Level Additional Mathematics
- assumes knowledge of O-Level Mathematics

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/2023SEAB4051>

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

ALGEBRA

GEOMETRY
&
TRIGONOMETRY

CALCULUS

LEARNING EXPERIENCES and ASSESSMENT embedded with:

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

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

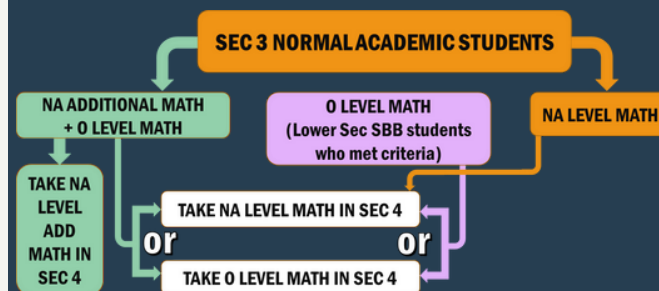
GEOMETRY AND TRIGONOMETRY STRAND

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

SEC 3 N(A) STUDENTS OFFERING CROSS-STREAM O LEVEL MATHEMATICS WITH NA LEVEL ADDITIONAL MATHEMATICS



Answers to common FAQs:

Additional Mathematics is not a requirement for any of the Higher Nitec Courses for Direct Entry Scheme to Polytechnics (DPP) after N Levels. Locate information on Higher Nitec from the JIEN 2023 booklet from page 73 onwards. Scan the QR Code or access the site:

<https://tinyurl.com/MOEJIEN2023>



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/4051P1> and <https://tinyurl.com/4051P2>