DUNMAN SECONDARY SCHOOL

ADDITIONAL MATHEMATICS

SECONDARY 2 EXPRESS STREAMING 2024
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/ExpAMath4049

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:
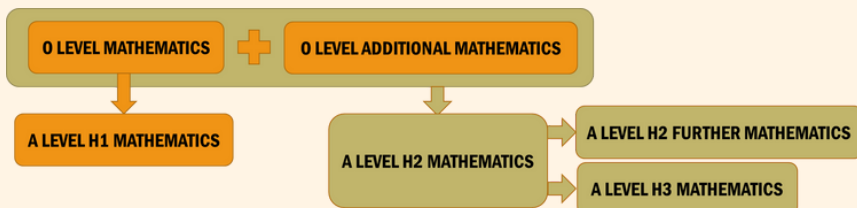
https://tinyurl.com/4049P1

https://tinyurl.com/4049P2

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 • Linear Equations and Simple Inequalities
Equations & 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 **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

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.

O LEVEL MATHEMATICS + O LEVEL ADDITIONAL MATHEMATICS

A LEVEL H1 MATHEMATICS

A LEVEL H2 MATHEMATICS → A LEVEL H2 FURTHER MATHEMATICS

A LEVEL H3 MATHEMATICS

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://www.moe.gov.sg/coursefinder

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