

**NORTHBROOKS
SECONDARY SCHOOL**
SOARING YET ROOTED

*Sec 2 Subject
Information:
Additional
Mathematics
(Exp)*



Combination offered for Exp stream:

1. Additional Mathematics is offered as an elective subject, in addition to compulsory subjects such as English Language, Mother Tongue, Mathematics, Pure/Combined Science, Pure/Combined Humanities.
2. Please note that subject combinations are reviewed annually and is subject to change.



Additional Mathematics Syllabus in a nutshell

The Additional Mathematics syllabus aims to enable students who have an aptitude and interest in Mathematics to:

- a. acquire mathematical concepts and skills for higher studies in mathematics and to support learning in the other subjects, with emphasis in the sciences, but not limited to the sciences;
- b. develop thinking, reasoning, communication, application and metacognitive skills through a mathematical approach to problem-solving;
- c. connect ideas within mathematics and between mathematics and the sciences through applications of mathematics; and
- d. appreciate the abstract nature and power of mathematics.



Additional Mathematics Syllabus content

The content is organised into three strands: Algebra, Geometry and Trigonometry, and Calculus. Topics covered are shown below.

Algebra	Geometry & Trigonometry	Calculus
Quadratic functions	Trigonometric functions, identities and equations	Differentiation and integration
Equations and inequalities	Coordinate geometry in two dimensions	
Surds	Proofs in plane geometry	
Polynomials and partial fractions		
Binomial expansions		
Exponential and logarithmic functions		



Assessment Objectives

AO1 Use and apply standard techniques

1. recall and use facts, terminology and notation
2. read and use information directly from tables, graphs, diagrams and texts
3. carry out routine mathematical procedures

AO2 Solve problems in a variety of contexts

1. interpret information to identify the relevant mathematics concept, rule or formula to use
2. translate information from one form to another
3. make and use connections across topics/subtopics
4. formulate problems into mathematical terms
5. analyse and select relevant information and apply appropriate mathematical techniques to solve problems
6. interpret results in the context of a given problem

AO3 Reason and communicate mathematically

1. justify mathematical statements
2. provide explanation in the context of a given problem
3. write mathematical arguments and proofs



Scheme of Assessment

Paper	Duration	Description	Marks	Weighting
Paper 1	2 h 15 min	There will be 12 – 14 questions of varying marks and lengths. Candidates are required to answer all questions.	90	50%
Paper 2	2 h 15 min	There will be 9 – 11 questions of varying marks and lengths. Candidates are required to answer all questions.	90	50%



Elementary vs Add Mathematics: What are the differences?

1. Elementary Mathematics is influenced by a stronger orientation towards learning mathematics as a tool, whereas Additional Mathematics is influenced by a stronger orientation towards learning mathematics as a discipline.
2. Students who want to pursue Add Mathematics need to have:
 1. Aptitude and interest in Mathematics
 2. A strong foundation in algebraic manipulation and mathematical reasoning
 3. Values such as persistence and resilience



Frequently Asked Questions

Q1 Is Additional Mathematics a compulsory subject for admission to Junior College (JC) / Millennia Institute (MI)?

A1 Additional Mathematics is **not** a compulsory subject for computation of L1R5 (JC) / L1R4 (MI) **for admission** to Junior College (JC) / Millenia Institute (MI).

While students' admission to JC / MI is based on L1R5 (JC) / L1R4 (MI) results, different JCs / MI require different subject pre-requisites for the subjects that your child / ward can take in JC / MI. Depending on the JC/ MI, Additional Math **may be a requisite subject** to offer Mathematics H2.

It is good to find out the relevant information from the targeted JC directly.



Frequently Asked Questions

Q2 Will taking Additional Mathematics affect the subjects that I can take in Junior College (JC) / Millennia Institute (MI)?

A2 Different JCs / MI require different subject pre-requisites for the subjects that your child / ward can take in JC / MI. Depending on the JC/ MI, Additional Math may be a requisite subject to offer Mathematics H2.

It is good to find out the relevant information from the targeted JC directly.



Frequently Asked Questions

Q3 Is Additional Mathematics a compulsory subject for admission to Polytechnic?

A3 Additional Mathematics is **not** a compulsory subject for computation of ELR2B2 for admission to Polytechnics.

While students' admission to Polytechnics is based on ELR2B2 results, the study of Additional Mathematics can help to build a strong foundation for the study of some Polytechnic courses e.g., engineering.

It is good to find out the relevant information from the targeted Polytechnic directly.



Useful links

For more information about the O level Additional Mathematics syllabus, scan this code:



<https://for.edu.sg/2024oamath>

