



**JUNYUAN SECONDARY SCHOOL**  
**SECONDARY 3**  
**SUBJECT COMBINATION 2023**  
**INFORMATION BOOKLET**

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# 1. Calendar of Events

## 1. Calendar of Events

Date	Event
<b>June Hols – T3W1</b>	Secondary 3 Subject Combination Self-paced SLS Lesson
<b>1 Jul</b>	Parents Engagement for Sec 3 Subject Combination
<b>T3W2 – T3W4</b>	Subject In-Conversation Sessions with Subject Teachers
<b>29 Sep – 14 Oct</b>	End of Year Examinations
<b>26 Oct</b>	Subject Allocation Exercise Briefing for Students
<b>28 Oct – 03 Nov</b>	Subject Allocation Exercise
<b>11 Nov</b>	Release of results for Subject Allocation Exercise
<b>11 – 15 Nov</b>	Appeal period
<b>18 Nov</b>	Release of results for Appeals

## 2. Promotion Criteria for Secondary 2

## 2. Promotion Criteria for Secondary 2

### 2.1 Secondary 2 Express to 3 Express

**Criterion:** Pass in English and an overall percentage pass in the average of all subjects.

- Failure to do so, student will be laterally transferred to Sec 3 Normal (A) in the following year. There is no retention at Secondary 2 Express.

### 2.2 Secondary 2 Normal (A) to 3 Normal (A)

**Criterion:** Pass in English and TWO other examinable subjects

OR

Pass in FOUR examinable subjects

- Failure to do so, student will be retained at Sec 2 Normal (A) in the following year.

### 2.3 Secondary 2 Normal (T) to 3 Normal (T)

**Criterion:** Pass in 2 subjects, one of which is English or Mathematics.

- Failure to do so, student will be retained at Sec 2 Normal (T) in the following year.

### 2.4 Secondary 2 Normal (A) to 3 Express

**Criterion:** Pass in English and 70% and above in EOY and overall results.

### 2.5 Secondary 2 Normal (T) to 2 Normal (A)

**Criterion:** Pass in English and 70% and above in EOY and overall results.

### 3. 2023 Subject Combination

### 3. 2023 Subject Combination

#### 3.1 Secondary 3 Express<sup>^</sup>

The table below provides an overview of the subject combinations offered to Secondary 3 Express students in 2023.

Option	No. of Subject	Languages (1 <sup>st</sup> and 2 <sup>nd</sup> )	Mathematics (3 <sup>rd</sup> )	Science (4 <sup>th</sup> )	Humanities (5 <sup>th</sup> )	Elective 1 (6 <sup>th</sup> )	Elective 2 (7 <sup>th</sup> )
A	7	English and Mother Tongue Language*	Elementary Math	Pure Chemistry	Social Studies/ History	Additional Math	Pure Physics Or Pure Biology
B	7					Additional Math	Principles of Accounts
C	7			Science (Chemistry/ Physics)  Or	Or  Social Studies/ Geography	Additional Math Or Principles of Accounts	Pure Geography Or Pure Literature Or Computing
D (new)	6			Science (Chemistry/ Biology)	Or  Social Studies/ Malay Literature	Design & Technology Or Art	

#### 7 'O' Level Subject Combination (Option A)

Student will have a total of 7 'O' Level subjects, inclusive of 2 Compulsory Languages, 2 Sciences, 1 Humanities and 2 Mathematics

Compulsory Languages	Sciences <sup>#</sup> (2)	Humanities (1)	Mathematics (2)
English Language <i>AND</i> Mother Tongue Language	Pure Chemistry + Pure Physics <i>OR</i> Pure Chemistry + Pure Biology	Social Studies/Geography <i>OR</i> Social Studies/History <i>OR</i> Social Studies/Malay Literature	Elementary Mathematics <i>AND</i> Additional Mathematics <sup>#</sup>

# A. Math and Pure Science operate at a more demanding level.

Students need to demonstrate mastery by obtaining a minimum overall percentage score of 55% in these subjects at Sec 2.



### **7 'O' Level Subject Combination (Option B)**

Student will have a total of 7 'O' Level subjects, inclusive of 2 Compulsory Languages, 1 Science, 1 Humanities, 1 Mathematics and 2 Electives.

<b>Compulsory Languages</b>	<b>Sciences (1)</b>	<b>Humanities (1)</b>	<b>Mathematics (1)</b>
English Language <i>AND</i> Mother Tongue Language	Science (Chemistry/Physics) <i>OR</i> (Chemistry/Biology)	Social Studies/Geography <i>OR</i> Social Studies/History <i>OR</i> Social Studies/Malay Literature	Elementary Mathematics
<b>Elective 1 (1)</b>		<b>Elective 2 (1)</b>	
Additional Mathematics <sup>#</sup>		Principles of Accounts	

<sup>#</sup> A. Math operates at a more demanding level.

Students need to demonstrate mastery by obtaining a minimum overall percentage score of 55% in Math at Sec 2.

### **7 'O' Level Subject Combination (Option C)**

Student will have a total of 7 'O' Level subjects, inclusive of 2 Compulsory Languages, 1 Science, 1 Humanities, 1 Mathematics and 2 Electives.

<b>Compulsory Languages</b>	<b>Sciences (1)</b>	<b>Humanities (1)</b>	<b>Mathematics (1)</b>
English Language <i>AND</i> Mother Tongue Language	Combined Science (Chemistry/Physics) <i>OR</i> (Chemistry/Biology)	Social Studies/Geography <i>OR</i> Social Studies/History <i>OR</i> Social Studies/Malay Literature	Elementary Mathematics
<b>Elective 1 (1)</b>		<b>Elective 2 (1)</b>	
Additional Mathematics <sup>#</sup> <i>OR</i> Principles of Accounts		Pure Geography <i>OR</i> Pure Literature <i>OR</i> Computing	

<sup>#</sup> A. Math operates at a more demanding level.

Students need to demonstrate mastery by obtaining a minimum overall percentage score of 55% in Math at Sec 2.

### **6 'O' Level Subject Combination (Option D)**

Student will have a total of 7 'O' Level subjects, inclusive of 2 Compulsory Languages, 1 Science, 1 Humanities, 1 Mathematics and 1 Elective.

<b>Compulsory Languages</b>	<b>Sciences (1)</b>	<b>Humanities (1)</b>	<b>Mathematics (1)</b>
English Language <i>AND</i> Mother Tongue Language	Science (Chemistry/Physics) <i>OR</i> (Chemistry/Biology)	Social Studies/Geography <i>OR</i> Social Studies/History <i>OR</i> Social Studies/Malay Literature	Elementary Mathematics
<b>Elective 1 (1)</b>			
Design & Technology <i>OR</i> Art			

***^ Subject Combinations are subjected to changes***

## 3.2 Secondary 3 Normal (A)^

### 6 'N' Level Subject Combination

Student will have a total of 6 'N' Level subjects, inclusive of 2 Compulsory Languages, 1 Science, 1 Humanities, 1 Mathematics and 1 Elective.

Compulsory Languages	Science (1)	Humanities (1)	Mathematics (1)
English Language  AND Mother Tongue Language	Science (Chemistry/Physics)  OR (Chemistry/Biology)	Social Studies/Geography  OR Social Studies/History	Elementary Mathematics
<b>Elective (1)</b>			
Principles of Accounts OR Additional Mathematics <sup>#</sup> OR Art OR Design & Technology			

<sup>#</sup> A. Math operates at a more demanding level.

Students need to demonstrate mastery by obtaining a minimum overall percentage score of 55% in Math at Sec 2.

<sup>^</sup> **Subject Combinations are subjected to changes**

### 3.3 Secondary 3 Normal (T)^

#### **6 'N' Level Subject Combination (Option A)**

Student will have a total of 6 'N' Level subjects.

Compulsory Subjects (4)	Elective 1 (1)	Elective 2 (1)
English Language	Science OR Design & Technology	Elements of Business Skills#
Mother Tongue Language		
Mathematics		
Computer Application		

# Students need to demonstrate mastery by obtaining a minimum overall percentage score of 50% in English at Sec 2.

#### **5 'N' Level Subject Combination (Option B)**

Student will have a total of 5 'N' Level subjects.

Compulsory Subjects (4)	Elective 1 (1)
English Language	Science OR Design & Technology
Mother Tongue Language	
Mathematics	
Computer Application	

*^ Subject Combination is subjected to changes.*

## 4. Considerations for Parents and Child

## 4. Considerations for Parents and Child

### Key Education and Career Messages for the child

1. Discover who you are
2. Navigate pathways with confidence
3. Make informed decisions and own them
4. Keep learning. Be Resilient.

- A. Communicate with your child to explore their interest.

You can explore their interest by asking about their favourite subjects

- B. Be aware of your child's strength and preferences.

Do they prefer working with people, data, things or ideas? Do they like to talk and discover more about people around them? Do they like working with numbers and organising information? Do they like to manipulate objects, operating machines or tools?

Do they like coming up with ideas for a situation or problem.

- C. Listen to your child as they articulate their career aspirations and possible education options.

Guide them in their decision-making by considering:

- Their interests, abilities and passion
- Favourite/best subjects, possible careers and aspirations
- The possible education options

- D. Help your child learn more about the world of work of different industries and careers.

You can discuss the possible education pathways that can lead to your children's career aspiration and introduce a variety of industries and careers for exposure. It is important to stay updated with the education landscape to stay connected with your children. Avoid relying only on your own past experiences alone as education policies have changed and new pathways have been created.

- E. Support your child's career interest and aspiration.

## 5. School Considerations for Subject Allocation

## **5. School Considerations for Subject Allocation**

The school will decide the final list of subject combinations to be offered by October 2022.

The final subject combination and/or classes offered will be dependent on the following:

- a) To provide students the necessary number and relevant range of subjects to progress towards post-secondary education
- b) Minimum number of students choosing and eligible for the combination to run the class for resource optimisation
- c) Availability of resources e.g. availability of teacher expertise for specific subject
- d) Student demand for subject combination

Each student will be allocated their subject combination based on the following:

- a) Merit - student's demonstrated ability in meeting the eligibility criteria for subject specific
- b) Choices - student's choice of subject combination
- c) Resources - availability of resources to be committed for the next 2 years



## 6. Entry Requirement for Junior Colleges and Millennia Institute

## 6. Entry Requirement for Junior Colleges and Millennia Institute

The aggregate computation and eligibility criteria for admission to a Junior College (JC), Millennia Institute (MI) are shown in the tables below.

**Table 6.1: Aggregate Computation Criteria for Junior Colleges (2-year)**

	<b>L1R5 : For Junior College Courses</b>
<b>L1</b>	First Language - English / Higher Mother Tongue
<b>R5</b>	Relevant Subject 1 - Humanities/Higher Art/Higher Music/Malay (Special Programme)/ Chinese (Special Programme)/Bahasa Indonesia  Relevant Subject 2 - Mathematics/Science  Relevant Subject 3 - Humanities/Higher Art/Higher Music/Mathematics/ Science/ Malay (Special Programme)/Chinese (Special Programme)/ Bahasa Indonesia  Relevant Subject 4 - Any GCE 'O' Level subjects (except Religious Knowledge)  Relevant Subject 5 - Any GCE 'O' Level subjects (except Religious Knowledge)

**Table 6.2: Eligibility Criteria for Admission to Junior Colleges (2-year)**

<b>Aggregate Range for L1R5 (excludes bonus points)</b>	<b>Meet Subject Requirements as specified in Table 6.5?</b>	
	<b>Yes</b>	<b>No</b>
≤ 15	Eligible	Eligible for <i>Conditional Admission</i>
16 - 20		Eligible for <i>Conditional Admission</i> only if students have grades of 'A1' or 'A2' in all the R5 subjects

**Table 6.3: Aggregate Computation Criteria for Millennia Institute (3-year)**

<b>L1R4 : For Millennia Institute Courses</b>	
<b>L1</b>	First Language - English / Higher Mother Tongue
<b>R4</b>	Relevant Subject 1 - Humanities/Higher Art/Higher Music/Mathematics/Science/ Malay (Special Programme)/Chinese (Special Programme)/Bahasa Indonesia
	Relevant Subject 2 - Humanities/Higher Art/Higher Music/Mathematics/Science/ Malay (Special Programme)/Chinese (Special Programme)/Bahasa Indonesia
	Relevant Subject 3 - Any GCE 'O' Level subjects (except Religious Knowledge)
	Relevant Subject 4 - Any GCE 'O' Level subjects (except Religious Knowledge)

**Table 6.4: Eligibility Criteria for Admission to Millennia Institute (3-year)**

<b>Aggregate Range for LIR4 (excludes bonus points)</b>	<b>Meet Subject Requirements as specified in Table 6.5?</b>	
	<b>Yes</b>	<b>No</b>
≤ 15	Eligible	Eligible for <i>Conditional Admission</i>
16 - 20		Eligible for <i>Conditional Admission</i> only if students have grades of 'A1' or 'A2' in all the R4 subjects

For more information on conditional admission to Junior College and Millennia Institute please refer to pg. 31 of *JAE Booklet 2022*. For further information on the Joint Admission Exercise (JAE), please visit <https://www.moe.gov.sg/-/media/files/post-secondary/2022-jae-information-booklet.pdf>

**Table 6.5: Subject Requirements for Admission to Junior Colleges and Millennia Institute**

Subject	Requirement
English Language	A1 to C6
Mother Tongue Language*: Chinese Language, Malay Language, Tamil Language <b>OR</b> Higher Chinese Language, Higher Malay Language, Higher Tamil Language <b>OR</b> Chinese Language 'B' Syllabus (CLB), Malay Language 'B' Syllabus (MLB), Tamil Language 'B' Syllabus (TLB)	A1 to D7 A1 to E8 Merit or Pass
Mathematics: Mathematics <b>OR</b> Additional Mathematics	A1 to D7 A1 to D7

*\*Official Mother Language refer to Chinese Language (CL), Malay Language (ML) and Tamil Language (TL) taken at the Singapore-Cambridge GCE 'O' Level Examination.*

*Non-Tamil Indian Languages (viz. Bengali, Gujarati, Hindi, Punjabi and Urdu) and Asian/Foreign Language (viz. Arabic, Burmese, French, German, Japanese and Thai) approved by the Ministry of Education in lieu of an Official Mother Tongue Language could be considered as Mother Tongue Language in deciding admission eligibility.*

**Note:**

1. Grades for both Higher Mother Tongue Language (viz. Higher Chinese, Higher Malay and Higher Tamil) and Mother Tongue Language (viz. Chinese, Malay and Tamil) cannot be used in the same aggregate computation.
2. "Merit" and "Pass" grades for the Mother Tongue 'B' Syllabus (viz. Chinese 'B', Malay 'B' and Tamil 'B') cannot be used for the computation of aggregate points.
3. Information extracted from JAE Booklet 2022. For further information on the Joint Admission Exercise (JAE), please visit <https://www.moe.gov.sg/-/media/files/post-secondary/2022-jae-information-booklet.pdf>

## 7. Entry Requirement for Polytechnics and Institute of Technical Education (ITE)

## 7. Entry Requirement for Polytechnics and Institute of Technical Education (ITE)

The aggregate computation and eligibility criteria for admission to a Polytechnics and Institute of Technical Education (ITE) are shown in the tables below.

**Table 7.1: Aggregate Computation Criteria For Polytechnics**

		ELR2B2 : For Polytechnic Courses			
Course Group		Art & Language-Related Courses (ELR2B2-A)	Business-Related Courses (ELR2B2-B)	Science & Technology Courses (ELR2B2-C)	Design Courses (ELR2B2-D)
EL		English			
R2	1st Group of Relevant Subjects	Art Combined Humanities Geography History Literature in English Music	Elementary Mathematics Additional Mathematics		
	2nd Group of Relevant Subjects	A.Maths Art Chinese Combined Humanities D & T Elementary Mathematics NFS Geography Higher Mother Tongue History Literature in English Malay Music POA Tamil	Art Combined Humanities Geography History Literature in English Music POA	Biology Chemistry Physics Combined Science Computing D & T NFS	Art Biology Chemistry Physics Combined Science Computing D & T NFS
B2		Best 2 other subjects excluding CCA			

**Table 7.2: Aggregate Computation Criteria For ITE**

		ELB4, ELR1B3 & ELR2B2 : For ITE Higher Nitec Courses			
Aggregate Type	Early Childhood / Beauty &Spa / Leisure & Travel / Hospitality Courses (ELB4-A)	Business Courses (ELR1B3-B)		Chemical & Life Sciences / Engineering / Information Technology Courses (ELR2B2-C)	
EL	English				
B4	Best 4 other subjects	R1	E. Math A. Math POA	R1	E. Math A. Math
		B3	Best 3 other subjects	R2	Physics, Chemistry, Biology Combined Science Computing, D & T
				B2	Best 2 other subjects

**Note:**

1. Grades for both Higher Mother Tongue Language (viz. Higher Chinese, Higher Malay and Higher Tamil) and Mother Tongue Language (viz. Chinese, Malay and Tamil) **cannot** be used in the same aggregate computation.
2. “Merit” and “Pass” grades for the Mother Tongue ‘B’ Syllabus (viz. Chinese ‘B’, Malay ‘B’ and Tamil ‘B’) cannot be used for the computation of aggregate points.
3. Information extracted from JAE Booklet 2022. For further information on the Joint Admission Exercise (JAE), please visit <https://www.moe.gov.sg/-/media/files/post-secondary/2022-jae-information-booklet.pdf>

## 8. Subject Information (Express and Normal Academic)



## 8. Subject Information (Express and Normal Academic)

### 8.1 English Language (EL) (Compulsory Subject)

The English Language is the lingua franca of the world. As such, it operates at many levels and plays many roles in Singapore. At national level, it is the common language that facilitates bonding among the different ethnic and cultural groups while at global level, English allows Singaporeans to participate in a knowledge-based economy which is ruled by a competitive international environment and rapid developments in technology.

It is therefore pertinent that our students are equipped with the necessary language skills that would enable them to access, process and keep abreast of information as well as to engage with the wider and more diverse communities outside of Singapore.

Our English Language syllabus aims to develop our students to be articulate, confident and effective communicators through systematic and explicit instruction as well as a contextualised and holistic approach to learning English.

Our secondary syllabuses focus very much on both receptive and productive skills so that students are able to listen, speak, write and represent in Standard English that is grammatical and fluent. There will also be teaching of grammar and vocabulary enrichment at upper secondary levels. While the former aims to reinforce the fundamental rules that students have learnt at lower levels, the latter aims to encourage students to constantly enlarge their vocabulary bank so that they can be more effective communicators.

#### **Scheme of Assessment at National Examination**

GCE 'O' Level and GCE 'N' Level Examination

<b>Component</b>	<b>Weighting</b>
Paper 1 – Writing	35%
Paper 2 – Comprehension	35%
Paper 3 – Listening	10%
Paper 4 – Oral Communication	20%

#### **FAQs**

**Q1: Does my child need to pass English Language to go to junior colleges?**

**A:** Yes, a minimum grade of C6 is a requirement for admission to junior colleges.

**Q2: What is the minimum grade that my child needs for English Language to gain admission to polytechnics?**

**A:** The minimum grade for English Language for admission to polytechnics is D7. Having said that, students need to bear in mind that EL is L1. In other words, the grade for English will be taken into account in the computation of the total aggregate score. If a student obtains a D7 for English, he needs to ensure that he does very well for the other subjects in order to obtain a low overall aggregate score.

In addition, students should take note that certain courses in junior colleges and polytechnics require a certain minimum grade for English as one of their entrance criteria.

## 8.2 Literature in English Language

This course aims to allow students to enjoy the reading of Literature and appreciate its contribution to aesthetic and imaginative growth. At the same time, students will have the opportunities to explore areas of human concern, thus leading to a greater understanding of themselves and others.

Students will be taught to read, understand and respond to various types of literary texts so as to appreciate the ways in which writers achieve their effects. In addition, students are to develop information retrieval strategies for the purposes of literary study. Finally, students will learn to construct and convey meaning clearly and coherently in written language.

### **Scheme of Assessment at National Examination**

GCE 'O' Level Examination

<b>Component</b>	<b>Weighting</b>
Paper 1 – Unseen Poetry and Set Text	50%
Paper 2 – Drama (Open Selection)	50%

### **FAQs**

**Q1: Is this a difficult subject to score in?**

**A:** It depends on students' interest (attitude) and flair in language (aptitude). Generally, students who love to read, analyse texts and have a flair for language do better since the subject requires students to express their responses to texts.

**Q2: How is Literature relevant in the twenty-first century?**

**A:** The subject trains one to be a critical reader and thinker as well as a proficient writer. Hence, Literature provides very good training for one's language skills which directly relates to courses like mass communication (including editing and journalism) and marketing.

In addition, Literature sharpens one's social-emotional awareness since more often than not, students are exploring the lives of the characters (including their psychology) and how these characters relate to those around them.

## 8.3 Mathematics (Compulsory Subject)

The syllabus is intended to provide students with fundamental mathematical knowledge and skills. The content is organised into three strands, namely, *Number and Algebra*, *Geometry and Measurement*, as well as *Statistics and Probability*. Besides conceptual understanding and skills proficiency explicated in the content strands, development of process skills that are involved in the course of acquiring and applying mathematical knowledge is also emphasised. These include reasoning, communication and connections, thinking skills and heuristics, and application and modelling; and are developed based on the three content strands.

The assessment will test students' abilities to:

- understand and use mathematical concepts and skills in a variety of contexts;
- organise and analyse data and information; formulate and solve problems, including those in real-world contexts; selecting and applying appropriate techniques of solution; interpret mathematical results;
- solve higher order thinking problems; make inferences; write mathematical explanation and argument.

### **Scheme of Assessment at National Examinations**

GCE O Level and GCE N Level Examinations

Component	Weighting
Paper 1	50%
Paper 2	50%

### **FAQs**

**Q1: Are students able to enter a junior college or polytechnic if they failed the subject?**

**A:** For entry to junior colleges, Mathematics grade may be included in the computation of L1R5.

For entry to polytechnics, other than satisfying the minimum L1R2B2 aggregate, the course requirements for majority of polytechnic courses would be a pass in Mathematics. More information could be found in the JAE booklet downloadable from the MOE website.

## 8.4 Additional Mathematics (A Math)

The syllabus prepares students adequately for A Level H2 Mathematics, where a strong foundation in algebraic manipulation skills and mathematical reasoning skills are required. The content is organised into three strands, namely, *Algebra*, *Geometry and Trigonometry*, and *Calculus*. Besides conceptual understanding and skill proficiency explicated in the content strand, the development of process skills, namely, reasoning, communication and connections, thinking skills and heuristics, and application and modelling are also emphasised. The O/N Level A Math syllabus assumes knowledge of O/N Level Mathematics.

### **For students planning to study H2 Mathematics in a junior college**

H2 Mathematics requires knowledge of O Level A Math or equivalent. The H2 Mathematics syllabus assumes knowledge of A Math at O Level. However, schools may offer H2 Mathematics to students who did not sit for A Math at O Level if they show an aptitude for the subject. These students must be prepared to put in the work to bridge the knowledge gap.

The grade for A Math can be used in the computation of the aggregates for JC courses in place of Mathematics if the student performs better in A Math.

### **For students planning to study in a polytechnic**

For students seeking admission to diploma courses in polytechnics, the ELR2B2 aggregate computation is used. Knowledge of O Level A Math will be useful if your polytechnic course requires you to study Mathematics.

### **Scheme of Assessment at National Examination**

GCE O and N Level Examination

<b>Component</b>	<b>Weighting</b>
Paper 1	50%
Paper 2	50%

### **FAQs**

#### **Q1: What are the differences between A Math and Mathematics?**

**A:** In terms of strands – A Math has 3 strands, i.e., Algebra, Geometry and Trigonometry, as well as Calculus while Mathematics has Numbers and Algebra, Geometry and Measurement, as well as Statistics and Probability. For the same strand, the depth of the content is different. For example, for Geometry in Mathematics, students learn how to find the equation of a straight line while in A Math, they learn how to find the equation of a circle. It should also be noted that a strong foundation in algebra acquired from the Mathematics syllabus would be very useful in the study of Additional Mathematics.

**Q2: Why does a student take A Math? Will it benefit the student when moving on to polytechnic/JC?**

**A:** A Math provides the foundation for JC H2 Mathematics and some courses in the polytechnics such as engineering courses.

**Q3: Is A Math a requirement for courses offered in the Polytechnics?**

**A:** A Math is not a requirement for courses offered in the Polytechnics. The grade for A Math can be used in the computation of the aggregates for JC and Poly courses in place of Mathematics if the student performs better in A Math.

**Q4: Is A Math a requirement for taking H2 Mathematics in Junior Colleges?**

**A:** H2 Mathematics at the JC level assumes knowledge of A Math at O Level. Some JCs do not allow their students to take up H2 Mathematics if they have not taken up A Math at O Level. However, schools may offer H2 Mathematics to students who did not sit for A Math at O Level if they show an aptitude for the subject.

## 8.5 Mother Tongue Language (MTL) (Compulsory Subject)

The Mother Tongue Language (MTL) policy requires all students to study their respective official Mother Tongue Language: Chinese, Malay and Tamil. A non-Tamil Indian may choose to offer as his/her Mother Tongue Language (a) Tamil, or (b) a non-Tamil Indian Language such as Bengali, Gujarati, Hindi, Punjabi or Urdu. Nonetheless, there is flexibility in the application of this policy for students who have been away from our school system for some years and who have not kept up with the study of their Mother Tongue Language. Students may apply for exemption from studying their official Mother Tongue Language or to study a non-official language such as French, German or Japanese in lieu of Mother Tongue Language. Applications should be made through the school. Applications will be considered on a case-by-case basis.

The purpose of the learning of Mother Tongue Languages at Junyuan Secondary School is to inculcate in every student the love for the language, and to develop individual to become an effective communicator.

The key approaches to mastering the communication skill is through listening, speaking, reading and writing. Through these approaches, our students are able to sharpen their critical thinking skills, deepen their understanding and also be able to articulate their views effectively.

### **Scheme of Assessment at National Examination**

#### GCE 'O' Level Examination

<b>Component</b>	<b>Weighting</b>
Paper 1 – Writing	30%
Paper 2 – Comprehension	35%
Paper 3 – e Oral & Listening Comprehension	35%

#### GCE 'N' Level Examination

<b>Component</b>	<b>Weighting</b>
Paper 1 – Writing	30%
Paper 2 – Comprehension	30%
Paper 3 – e Oral & Listening Comprehension	40%

#### GCE 'O' Level Higher Mother Tongue Language Examination

<b>Component</b>	<b>Weighting</b>
Paper 1 – Writing	40%
Paper 2 – Comprehension	40%
Paper 3 – e Oral	20%

### **Mother Tongue Language e Oral Examination Format**

The papers include reading passages and conversation. Before the examination, the candidates will have 10 minutes silent reading time for reading passages and watching video clips. During the examination, candidates will be asked to read the passages

aloud and followed by a conversation regarding to the video clips with the oral examiners.

### **Mother Tongue Language (Higher) Syllabus**

To allow more students to deepen their knowledge and appreciation for these languages and their cultures, Junyuan offers HCL from Secondary 3. Students who have obtained at least 70 marks and above in their overall CL results at the end of the year can apply. For HML and HTL, the students can apply but lessons will be conducted at the language centre (which you can refer to further down the document).

### **GCE 'O' Level Examination (HTML)**

<b>Component</b>	<b>Weighting</b>
Paper 1 – Writing	40%
Paper 2 – Comprehension	40%
Paper 3 – Oral	20%

### **Mother Tongue Language 'B' Syllabus**

Introduced in 2001, the MTL 'B' syllabus emphasised practical communication skills to help students who face exceptional difficulties with MTL. It aimed to motivate these students to learn their MTL up to a realistic level, and sustain their interest in their MTL and culture.

Students within the following categories will be allowed to take MTL 'B':

- Those with Grade C and below for PSLE MTL; and
- Those with learning disabilities, e.g. dyslexia, ADHD, autism and hearing impairment. (Those with more severe disabilities will be exempted altogether from MTL requirements.)
- Those who obtain E8 and below for school examinations for 2 consecutive years.

Schools have the flexibility to consider any application from other students to offer MTL 'B'. We will assess the MTL standard that a student can achieve with reasonable effort, taking into account the student's PSLE MTL grade and MTL performance in his secondary school examinations.

### **GCE 'O' Level MTL B Examination**

<b>Component</b>	<b>Weighting</b>
Paper 1 – e Writing	20%
Paper 2 – Comprehension [MCQ]	30%
Paper 3 – eOral & Listening Comprehension	50%

## FAQs

**Q1: Can Mother Tongue 'B' Syllabus be used in the computation of aggregate for admission to JCs, MI, Polytechnic and ITE?**

**A:** No, "Merit" and "Pass" grades for the Mother Tongue 'B' Syllabus (viz. Chinese 'B', Malay 'B' and Tamil 'B') cannot be used for the computation of aggregate points.

**Q2: Where is the venue of HMTL lessons? Does my child need to report to any Language Centre?**

**A:** Upper secondary students taking HCL will be having their lessons at the designated language centre – Ngee Ann Secondary School. Lessons are conducted twice a week, for 3 hours on each day.

Students taking HML will be having their lessons at Temasek Secondary School.

Students taking HTL will be having their lessons after school in UPTLC.

**Q3: Does my child need to take both MTL and HMTL lessons? Does my child need to stay back after school for HMTL lessons?**

**A:** Students taking HMTL need not take MTL lessons. However, they will have to sit for the GCE O-level MTL examination at the end of Secondary 3 before they take the GCE O-level HMTL examination in Secondary 4.

Students taking HCL report for their HCL classes during mother tongue periods. Secondary 3 HCL students will have extended curriculum of an hour on one of the weekdays.

Students taking HML report for the ML class while students taking HTL will do self-revision during mother tongue periods. Their lessons at the external centres are conducted once a week after school.

**Q4: What are the incentives of taking Higher Mother Tongue language (HMTL)?**

**A:** Students who obtain C6 or above for O-level HMTL and English Language will have 2 points deducted from their L1R5 aggregate score at O-level Exam for admission to Junior Colleges. (Student must first meet aggregate range)

Students who obtain C6 or above for O-level HMTL and English Language can use HMTL as L1 instead of English Language. However, if HMTL language is used as L1, O-level MTL (taken at Sec 3) cannot be used as one of the R5 for aggregate score computation.

Students need not offer Mother Tongue language at JC level if he/she has obtained a D7 or better for O-Level HMTL.

**Q6: My child is not offered HMTL. Can my child appeal to offer HMTL?**

**A:** MOE has identified a list of students who are eligible to take HMTL (HCL/HML/HTL) in Secondary 1. The school will admit the students based on this list. However, the school will identify students who have done well in MTL in Secondary 2 and their overall and offers them HMTL.



## **Q7: FAQ regarding other non-CL/ML Mother Tongue Languages**

### **Q7a. What will the students who are excused from MTL be doing during mother tongue periods?**

**A:** Students who are not taking MTL in school will do self-revision during mother tongue periods.

The lessons at the external centres are conducted once a week after school. If the students have MTL lessons externally, they will be excused from lesson (depending on the time taken for transportation) to make their way to the centres.

If the last period of the day is a MTL lesson, the students can leave school early.

### **Q7b. What are the things to note for Foreign Language (e.g. French/German) in-lieu of MTL?**

**A:** There is no need to reapply MTL if approval is granted in primary school. Vacancies to take lesson at MOELC are scarce and priority is given to students who have been given approval to take these subjects as Third Language. If a student wishes to be placed in the waiting list, please obtain the application form from HOD/MTL and submit the application.

Students who opt to take Foreign Languages are expected to seek private lessons externally and provide proof of attendance to the school periodically, even if they do not get a place in the MOELC.

Students may register for the yearly exam at MOELC (Bishan), the result will be reflected in their report book. At the end of Sec 4, students will take O level MTL exam.

### **Q7c. What are the things to note for Non-Tamil Indian Languages (Bengali/ Gujarati/ Hindi/ Punjabi/ Urdu)?**

**A:** The school does not have Hindi Class conducted during MTL lessons.

Parent should enrol their children in a NTIL language centre, e.g. Hindi Society Centre for Hindi lessons. The Board for the Teaching and Testing of South Asian Languages (BTTSAL) oversees NTIL instruction and assessment. The list of NTIL centres can also be found on the official BTTSAL website at [bttasal.com](http://bttasal.com).

Students are to maintain regular attendance at the centres. Result from the centres will be reflected in the report book. At the end of Sec 4, students will take O level MTL exam.

**Q8. How can Express/Normal Academic students go about the application for MTL 'B' syllabus (CLB/ MLB/TLB)?**

**A:** Obtain the application form through your child's subject teacher and support your application with a parent's note. Do note that students need to fulfil at least one of the following criteria in order to be considered:

- Grade C or below for MTL in PSLE
- Consistent D7 and below for MTL in school-based assessment (Exp)
- Consistent U and below for MTL in school-based assessment (NA)

**Summary of other MTL options and locations**

	MTL	Language Center
1	Higher Tamil	Umar Pulavar Tamil Language Centre
2	Tamil	Changkat Changi Sec Sch
3	Hindi	Angsana Primary School 3 Tampines ST 22 S529363 Run by the Hindi Society of Singapore
4	Hindi	The Hindi Society Mahatma Gandhi Memorial 3 Race Course Lane S 218731
5	Hindi	Bedok Green Primary School
6	Higher Malay	Temasek Sec Sch
7	CL B	St Hilda's Sec Sch (Except Sec 4 – offered in Junyuan Sec)

## 8.6 Humanities (Compulsory Subject)

Humanities is a compulsory subject offered at upper secondary level to Express and Normal Academic students. Unlike the Humanities subjects offered at lower secondary, Humanities at upper secondary level is made up of two components: Social Studies and an Elective. The Elective may either be a Geography Elective, a History Elective or a Literature in Malay Elective. Humanities (Social Studies, Literature in Malay) is only offered to express course students.

The Social Studies syllabus serves to expose our students to key issues challenging contemporary Singapore. It prepares our students to meet these challenges in an increasingly complex global economy, and develop in our students a sense of belonging and rootedness to Singapore even as we become more cosmopolitan in our outlook.

In addition to Social Studies, the knowledge and higher order thinking skills offered in the Elective subjects will equip our students for learning at pre-university institutions (i.e. junior colleges and centralised institute) and polytechnics. The skills acquired will enable them to be critical thinkers and analyse issues objectively. Humanities helps to educate your child in the nuances of the social sciences and humanities so that they can handle complex issues in the future.

### **Scheme of Assessment at National Examination**

#### **GCE 'O' Level and GCE 'N' Level Examination**

<b>Component</b>	<b>Weighting</b>
Social Studies	50%
Electives: Geography or History or Literature in Malay	50%

### 8.6.1 Humanities (Social Studies, Geography)

Geography bridges the humanities, social and natural sciences. It is a holistic subject that provides students with integrative ways of understanding the real world. Students will explore the Earth, its natural and man-made environments and examine human interactions with these environments, from personal to global scales. Geography fascinates and inspires students, enabling them to gain a deep appreciation of the Earth's beauty, the immense power of natural forces, and ingenious ways humans thrive under different circumstances. Through Geography, students will understand how places and landscapes evolve, deliberate on consequences arising from our everyday decisions, and experience the mosaic of cultures and society.

The overarching theme of sustainable development in the Geography syllabuses aims to deepen students' understanding of the impact of human activity on environmental sustainability and vice versa. The study of Geography provides opportunities for students to understand sustainability-related challenges around the world including Singapore in an integrated way, providing students with the kind of synthesis and holistic thinking needed to inspire them to take action to achieve a more sustainable

world. A holistic and continued coverage of ideas and knowledge through the context of sustainable development is planned into the curriculum across all levels of study, which explores sustainability through different topics on human-environment relationships.

### **8.6.2 Humanities (Social Studies, History)**

What is the value of learning History? In a world where attention is often divided between concerns over the present and future, the relevance of History is often questioned. Learning to manage the present and anticipate the future would not be possible without knowing the past. By equipping students with knowledge and attributes, History allows students to draw connections between the past and present by understanding how the nature and impact of past developments explain today's world.

Studying history helps us understand and grapple with complex questions and dilemmas by examining how the past has shaped (and continues to shape) global, national, and local relationships between societies and people.

History helps us realize how different our lived experience is from that of our ancestors, yet how similar we are in our goals and values. These attributes support learners to develop the Desired Outcomes of Education so that they become well-prepared individuals, able to acquire personal growth, contribute to the nation and respond to global developments.

### **8.6.3 Humanities (Social Studies, Literature in Malay)**

The syllabus aims to expose students to literary devices that will instill values pertaining to morality, culture and citizenship so as to develop them holistically. In addition, students will learn to appreciate the beauty of the language used in literary texts, thus cultivating a reading culture.

Students will be taught to analyse literary texts in terms of theme, plot, background, values, language used and the intent of the writer. Students will also learn how to interpret and respond appropriately to a given text in a clear and coherent manner.

The book which will be used in 2023 is ANTOLOGI KARYA PAHLAWAN PANGGUNG (Unggun Creative, Singapura, 2018).

The texts which we are using are as follows (subjected to revision):

(a) Sajak (Poem)

- Anakku – Mohamed Latiff Mohamed
- Tidak Senang Dengan Duduk-duduk – Masuri S.N.
- Kepada Pohon Tak Bernama – Rasiah Halil
- Manuskrip – Noridah Kamari
- Ke Makam Bonda – Usman Awang

(b) Cerpen (Modern Prose)

- Sambal Goreng Mak – Wan Jumaidah Mohd Jubri
- Kudrat – Maimunah Kemat
- Pahlawan Panggung – Suratman Markasan
- Nyanyuk – Jamal Ismail
- Dr Remaja PhD – Sharifah Khadijah Aljoofri
- Bintang Dua Belas – Farihan Bahron
- Orkidnya Sudah Menjadi – Khadijah Hashim
- Tika Aksara Menari – Djohan A. Rahman

**Scheme of Assessment at National Examination (Elective Paper)**

GCE 'O' Level Examination

Component for Literature in Malay	Weighting
Paper 2 <ul style="list-style-type: none"><li>• Part A: Poem / Modern Prose</li><li>• Part B: Text Analysis (Poem / Modern Prose)</li></ul>	50%

\*Note: Students taking the Elective Paper will only sit for Paper 2. Paper 1 is only applicable for the Full Paper.

**FAQs**

**Q1: Why is Humanities compulsory?**

**A:** The subject is mandatory as required by the Ministry of Education. The Humanities syllabus equips our students with essential knowledge and skills in the humanities and social sciences that are necessary for the 21<sup>st</sup> century workplace. More importantly, it inculcates core values and helps to strengthen their sense of belonging to the country as a people.

**Q2: Can my child drop the subject if he/she is not doing well in Secondary 4?**

**A:** No. It is compulsory.

**Q3: Can my child offer both two Electives instead of Social Studies?**

**A:** No. Social Studies must be taken. It is to be studied with either a Geography Elective, a History Elective or a Literature in Malay Elective (offered only for the Express stream).

**Q4: How can my child prepare for their Humanities subjects?**

**A:** Students are encouraged to read widely and be in touch with current affairs. They should conscientiously review the subject content and practice the skills required in the subject.

**Q5: Is Literature in Malay a difficult subject to manage?**

**A:** This subject requires students to read and analyse literary texts. Therefore, it is suitable for students who love to read and have a flair in Malay language as they are required to express their responses to texts

## 8.7 Geography

Geography bridges the humanities, social and natural sciences. It is a holistic subject that provides students with integrative ways of understanding the real world. Students will explore the Earth, its natural and man-made environments and examine human interactions with these environments, from personal to global scales. Geography fascinates and inspires students, enabling them to gain a deep appreciation of the Earth's beauty, the immense power of natural forces, and ingenious ways humans thrive under different circumstances. Through Geography, students will understand how places and landscapes evolve, deliberate on consequences arising from our everyday decisions, and experience the mosaic of cultures and society.

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### **Scheme of Assessment at National Examination**

#### **GCE 'O' Level Examination**

<b>Paper One</b>	<b><u>Content</u></b>	<b><u>Format</u></b>	<b><u>Time</u></b>
50%	1) Geography in Everyday Life (Fieldwork) 2) Tourism 3) Climate	3 compulsory structured questions  Question 1: Geography in Everyday Life – Topic 3 (Fieldwork) (20m) Question 2: Tourism (15m) Question 3: Climate (15m)  Each structured question will consists of no more than 9 sub-parts. Candidates will be required to answer one 9 marks question in either Question 2 or Question 3. The fieldwork context for Question 1 may or may not relate to the clusters covered in the syllabus content.	1h 45 mins

<u>Paper</u>	<u>Content</u>	<u>Format</u>	<u>Time</u>
Two  50%	1) Geography in Everyday Life 2) Tectonics 3) Singapore	3 compulsory structured questions. Question 1: Geography in Everyday Life Cluster – Topics 1 and 2 (15m) Question 2: Tectonics (15m) Question 3: Singapore (20m)  Candidates will be required to answer one 9 marks question in either Question 2 or Question 3.	1h 45 mins

### FAQs

**Q1: Can my child drop the subject if he/she is not doing well in Secondary 4?**

**A:** This will be subjected to approval by the school.

**Q2: Can my child take Geography and Humanities (Social Studies, Geography)?**

**A:** No. Geography must be taken with either Humanities (Social Studies, History) or Humanities (Social Studies, Literature in Malay).

**Q3: Is this subject difficult to manage?**

**A:** Students can do well as long as they put in consistent effort and read widely.

## 8.8 Sciences (Compulsory Subject)

The school offers Science (Biology/Chemistry or Chemistry/Physics) or two Pure Sciences (Pure Chemistry and Pure Biology or Pure Physics).

### Physics

The 'O' Level Physics and Science (Physics) syllabuses run for a 2-year duration in both Secondary 3 and Secondary 4. The 'O' level Physics and Science (Physics) syllabuses provide students with a coherent understanding of energy, matter and their interrelationships. They focus on investigating natural phenomena and then applying patterns, models (including mathematical ones), principles, theories and laws to explain the physical behavior of the universe. The theories and concepts presented in them belong to a branch of Physics commonly referred to as classical Physics. Modern Physics, developed to explain the quantum properties at the atomic and sub-atomic level, is built on the knowledge of these classical theories and concepts.

The broad content structure include:

- Measurement
- Newtonian Mechanics
- Thermal Physics
- Waves
- Electricity & Magnetism

## **Biology**

The 'O' Level Biology and Science (Biology) syllabuses run for a 2-year duration in both Secondary 3 and Secondary 4. It is designed to have less emphasis on factual content and a greater emphasis on the understanding and application of scientific concepts and principles. This approach has been adopted in recognition of the need for students to develop skills that will be of long-term relevance.

The teaching and learning programmes based on this syllabus will feature a wide variety of learning experiences designed to promote inquiry.

The broad content structure include:

- Principles of Biology
- Maintenance and Regulation of Life Processes
- Continuity of Life
- Man and His Environment

## **Chemistry**

The 'O' Level Chemistry and Science (Chemistry) syllabuses run for a 2-year duration in both Secondary 3 and Secondary 4. It is designed to let students have a better understanding of the world they live in, the interactions between the different matter in our surroundings and most importantly, the curriculum strives to cultivate critical thinking.

Besides having a strong conceptual understanding and the ability to apply theories, this subject also requires students to develop practical skills through various types of hands-on experiments. The teaching and learning programmes based on this syllabus will feature a wide variety of learning experiences designed to promote inquiry and will eventually provide the students with a good foundation that is relevant in the future practice of science.

The broad content structure include:

- Experimental Chemistry
- Atomic Structure & Stoichiometry (Calculation)
- Chemistry of Reactions
- Periodicity
- Atmosphere
- Organic Chemistry

## **Scheme of Assessment at National Examination**

GCE 'O' Level Examination (Pure Sciences)

<b>Component</b>	<b>Duration</b>	<b>Weighting</b>
Paper 1 – Multiple Choice	1 h	30%
Paper 2 – Structured and Free Response	1 h 45 min	50%
Paper 3 – Practical	1 h 50 min	20%



## GCE 'O' Level Examination (Combined Science)

Component	Duration	Weighting
Paper 1 – Multiple Choice	1 h	20%
Paper 2, 3, or 4 – Structured and Free Response	1 h 15 min	65%
Paper 5 – Practical	1 h 30 min	15%

## GCE 'N' Level Examination (Combined Science)

Component	Duration	Weighting
Paper 3 – Science (Chemistry) Multiple Choice	1 h 15 min	20%
Paper 4 – Science (Chemistry) Structured		30%
Paper 1 or 5 – Science (Physics) or Science (Biology) Multiple Choice	1 h 15 min	20%
Paper 2 or 6 – Science (Physics) or Science (Biology) Structured		30%

## FAQs

### Q1: What are the differences between Pure and Combined Sciences?

**A:** In terms of content coverage, Pure Sciences cover more topics and in greater depth per topic.

### Q2: Will doing Combined Science affect the chances of my child going to a junior college?

**A:** It will not, because the child's entry to the junior college is solely based on the L1R5 results. However, different junior colleges require different subject pre-requisites for the choice of subjects. As the requirements differ from school to school and may change from year to year, it is best to check with the relevant institutions for their specific requirements.

### Q3: Will doing Combined Science affect the courses my child can take in a Junior College?

**A:** Based on MOE policy, your child may select subjects at 3 different levels of study: Higher 1 (H1), Higher 2 (H2) and Higher 3 (H3). H2 subjects are equivalent to the rigour of the traditional GCE 'A' level while H1 subjects are equivalent to half of H2 in breadth but similar in depth. H3 subjects are offered only to students who wish to excel in the subject at a higher level. To study a Science subject at H1 or H2 level, your child must have studied the subject either as Combined Science or Pure Science at GCE 'O' level. However, specific subject pre-requisites may vary from JC to JC, it is good to find out the relevant information from the targeted JC directly.

**Q4: Will doing Combined Science lower the chances of entry to Polytechnic?**

**A:** No, it will not. The selection criteria for entry into Polytechnic courses is ELR2B2 where EL represents English Language, R2 represents two relevant subjects and B2 represents any two other subjects, including those in the two groups of relevant subjects that have not already been used in the computation.

**Q5: Will doing Combined Science affect the courses my child can take in a Polytechnic?**

**A:** The polytechnic courses are broadly categorized into 3 areas – Business-related, Science & technology, and Design courses. Both Science and Pure Science subjects belong to the 2<sup>nd</sup> group of relevant subject for Science & Technology and Design courses. On top of ELR2B2, your child will also have to meet the eligibility criteria for the individual courses.

**Q6: Does my child qualify for admission to Medicine school in NUS or NTU if he/she does not take any Pure Science subject at 'O' Level?**

**A1:** For admission to NUS or NTU School of Medicine, you require a good H2 pass in Chemistry and either Biology or Physics in JC to meet the pre-requisite for admission to NUS School of Medicine. JCs can offer Science subjects at H2 level to students who take Combined Science at 'O' Level. As specific subject pre-requisites may vary from JC to JC, it is good to find out the relevant information from the targeted JC directly.

Details for admission to NUS School of Medicine can be found at:

<https://medicine.nus.edu.sg/prospective-students/bachelor-of-medicine-and-bachelor-of-surgery-mbbs/admissions-frequently-asked-questions/>

Details for admission to NTU School of Medicine can be found at:

[https://www.ntu.edu.sg/medicine/education/bachelor-of-medicine-and-bachelor-of-surgery-\(mbbs\)/entry-requirements](https://www.ntu.edu.sg/medicine/education/bachelor-of-medicine-and-bachelor-of-surgery-(mbbs)/entry-requirements)

**Q7: Does it mean that my child's post-secondary education options are very limited if he/she does not take any Pure Science subject?**

**A:** This is untrue. A wealth of opportunities in different courses awaits you in the JCs and Polytechnics. The important thing here is to achieve a good L1B4 and L1R5 score to enter these institutions.

## 8.9 Computing

Technology is inevitable and surrounds us in almost all aspects of living, from the moment we wake to critical aspects of our daily routines. The exponential growth of technology over the last decade alone has given rise to revolutionized ways of operation thus forming new unknown careers that extends to all industries. Economists apply deep learning models to financial data. Musicians work with synthesized sound. Surgeons operate using robotics arms in complex surgeries. Artists work with digital images.

Computing, or the understanding of how technology works gives students an empowering start to the intrinsic ways it is used to solve business and societal challenges. In fact, computing is about problem solving, thinking analytically and finding innovative ways to tackle complex tasks creatively and efficiently. These transferable skills open diverse opportunities in our ever-changing world.

The Computing curriculum aims to grow students' interest and competency in more advanced concepts and skills. This will equip them with the necessary foundation to continue with post-secondary computing courses. A secondary aim is to encourage students to consider careers in computing technology and systems or provide them with tech skills adaptable to their discipline of choice. Our aspiration is for this group of students with the passion for Computing to eventually harness their talent to solve complex problems or create new value propositions in society through technology.

The aims of this subject are to enable students to:

- apply logical reasoning and algorithmic thinking in analysing problem situations and developing solutions;
- develop simple programs through the use of Python;
- understand the impacts related to the daily use of information communications technology (ICT) in daily life;
- understand and explain the ethical, social and economic issues associated with the use of ICT.

The main modules of the syllabus are:

### *Module I – Data and Information*

- Data Management
- Data Representation
- Ethics, Social and Economic Issues

### *Module II – Systems and Communications*

- Computer Architecture
- Data Communications

### *Module III – Abstraction and Algorithms*

- Problem Analysis
- Algorithm Design

### *Module IV – Programming*

- Program Development
- Program Testing

## **Scheme of Assessment at National Examination**

GCE 'O' Level Examination

<b>Component</b>	<b>Weighting</b>
Paper 1 – Written Paper	70%
Paper 2 – Practical (Programming)	30%

### **FAQs**

**Q1: Does my child need to be good in a programming language such as Java/C++/Python in order to take the subject?**

**A:** It is not a requirement for your child to have prior knowledge in a programming language. Students will be progressively taught programming skills as part of the two year lesson package for the subject which is more than sufficient to meet the needs of the O levels.

**Q2: Is Computing a relevant subject considered for aggregate computation to the Pre-University (i.e. Junior Colleges and Millennia Institute), Polytechnic and ITE courses?**

**A:** Yes, Computing is one of the relevant subjects to Pre-University courses, Science and Technology-related and Design-related courses in Polytechnics. Otherwise, it can be considered as one of the Best 2 Other Subjects for aggregate computation in Polytechnics. For ITE courses, Computing can be considered as one of Best 2 or Best 3 Other Subjects for aggregate computation.

**Q3: Which higher institutions offer computing as a subject at A Level?**

**A:** The following higher institutions will offer Computing at A Level:

- Anglo-Chinese Junior College
- Dunman High School (Junior College)
- Hwa Chong Institution (Junior College)
- Jurong Pioneer Junior College
- Nanyang Junior College
- National Junior College
- River Valley High School (Junior College)
- St. Andrew's Junior College
- Temasek Junior College
- Victoria Junior College
- Yishun Innova Junior College

## 8.10 Principles of Accounts (POA)

The study of accounting helps students understand how businesses measure and communicate their performance, and make use of both accounting and non-accounting information related to their businesses to make decisions. Through the study of accounting, they will acquire transferrable skills such as organising and analysing information for decision-making, and develop attitudes of accuracy, orderliness and an appreciation of professional ethics.

Key Modules:

- Types of Businesses
- Accounting Theories
- Double Entry Recording System
- Financial Statements
- Income and Expenses
- Assets (Inventory, Trade Receivables, Non-current Assets)
- Liabilities (Trade Payables, Long-term borrowings)
- Equities
- Correction of Errors
- Analysis of Financial Statements for Decision-Making (only for 'O' Level)

### **Scheme of Assessment at National Examination**

GCE 'O' Level and GCE 'N' Level Examination

<b>Component</b>	<b>Weighting</b>
Paper 1	40%
Paper 2	60%

### **FAQs**

**Q1: Does my child need to be good in Math in order to do well for the subject?**

**A:** POA is not just about figures and numbers. The syllabus also focuses on interpreting and analysing accounting information for decision making.

**Q2: Is POA a pre-requisite for business courses in Polytechnic?**

**A:** No. However, the foundational knowledge learnt will be an advantage in pursuing any business courses in Polytechnic.

## 8.11 Design & Technology (D&T)

Design, as a unique way of thinking and acting, involves planning with meaningful intention and purpose. Broadly and simply defined, designing comprises rational thought processes undertaken in a somewhat logical sequence and all this is nested within a holistic fabric of critical and creative thinking processes that also involves intuitive responses.

Design & Technology is offered at the upper secondary level as an elective for students. During the course of study, students are required to design which involve research, reasoned application of knowledge and skills in the areas of design and technology.

The aims of the D&T syllabus are to enable students to:

- foster positive values and develop dispositions for enterprise, creativity and innovation through research and exploration, idea conceptualisation and development, communication, working with materials and tools in response to needs identified;
- harness their innate curiosity and ability to create through design-and-make activities;
- develop the quality of tenacity through continuous refinement of their ideas towards a viable solution within a given timeframe;
- exercise judgements of an aesthetic, technical and economic nature;
- develop an awareness of design in the areas of social, culture and environment; and
- acquire knowledge and skills beyond that as stipulated in the syllabus through the contexts of the design-and-make activities

### **Scheme of Assessment at National Examination**

GCE 'O' Level and GCE 'N' Level Examination

Component	Weighting (O and NA)
Paper 1 – Written Examination	40%
Paper 2 – Design Project	60%

### **FAQs**

**Q1: Is Design & Technology a relevant subject in application to Polytechnic courses?**

**A:** Design & Technology is one of the relevant subjects in application to Science & Technology courses or Design-related courses in Polytechnics.

**Q2: What is a Design Project?**

**A:** The Design Project comprises a completed working Prototype, Design Journal and Presentation Boards. The coursework paper will be issued in January and students are expected to work on their Design Project during scheduled sessions in school after curriculum time. Students are required to work independently and adhere to the scheduled submission timeline.

## 8.12 Nutrition & Food Science (NFS) (Normal Academic only)

Nutrition & Food Science (NFS) is offered at the upper secondary level as an option for students who have an interest for the subject. The syllabus aims to provide students with a broad understanding of concepts in nutrition and health, food literacy and principles of food science.

The syllabus content comprises three main sections: Nutrition and Health, Food Literacy and Food Science. The topics and objectives are to be taught over two years (Express)/ three years (Normal Academic).

Students will be exposed to authentic real-world contexts through hands-on practical and coursework. Through these learning experiences, the syllabus aims to develop students to:

- lead a healthier lifestyle proactively through proper diet and nutrition;
- advocate sustainable food consumption by planning and making appropriate food choices; and
- apply principles of culinary science creatively in food preparation and cooking.

### **Scheme of Assessment at National Examination**

GCE 'O' Level and GCE 'N' Level Examination

<b>Component</b>	<b>Weighting</b>
Paper 1 – Written Examination	40%
Paper 2 – Coursework	60%

### **FAQs**

#### **Q1: What does coursework mean?**

**A:** Coursework refers to a rigorous research paper (approximately 20 – 25 pages of writing for O' level and 15 – 20 pages of writing for N' level) which requires students to analyze, think critically, plan and carry out comprehensive, thorough research and construct an investigative experiment (GCE 'O' Level only) in which they ask questions, examine issues, gather, record, collate, interpret and evaluate data. It may involve students in carrying out any of the following:

- comparative studies;
- investigative work;
- a survey; and
- industrial visits

These should be conducted in relation to the research paper. Practical work is an essential feature of the coursework.

**Q2: What are the components in Coursework?**

**A:** There are 6 components in Coursework namely:

- Research
- Decision making
- Investigation (for O' level) / Exploratory Study (for N' level)
- Planning
- Execution (organization & management, manipulation, product & presentation)
- Evaluation

**Q3: How much time is required to complete the coursework?**

**A:** A duration of 28 hours is specified for the O' level coursework and 25 hours is specified for the N' level coursework. As coursework must be done in school, students will complete it within extended curriculum hours.



## 8.13 Art

The ability to communicate visually through pictures has become an increasingly important and sought-after skill in the 21<sup>st</sup> century work place where individuals are expected to have multiple skills. Art education will help a student to think critically and creatively from multiple perspectives and also become culturally aware individuals in our society.

The Art syllabus is designed to provide students with the opportunity to:

- nurture an informed awareness and appreciation of the visual arts;
- enhance ability to identify and solve problems creatively in visual and tactile forms;
- develop competency in the use of art and design principles, materials and processes;
- foster self-confidence and a sense of achievement through the practice of the visual arts; and
- cultivate an inquiring mind, a spirit of experimentation and a passion for the visual arts.

Art Students are expected to:

- work independently for most assignments
- conduct visual research by taking their own pictures and reading about art, artworks and artists
- be diligent in completing their drawing and painting assignments at home

### **Scheme of Assessment at National Examination**

GCE 'O' Level Examination

<b>Component</b>	<b>Weighting</b>
Paper 1 – Coursework	60%
Paper 2 – Drawing and Painting	40%

GCE 'N' Level Examination

<b>Component</b>	<b>Weighting</b>
Paper 1 – Coursework	60%
Paper 2 – Drawing and Painting	40%

### **FAQs**

#### **Q1: What is Coursework?**

**A:** The Coursework unit comprises of a finished artwork and not more than five A2 sheets of preparatory studies for N(A) level coursework and eight A2 sheets of preparatory studies for O-level coursework. The question paper will be issued in January and students are expected to work on their coursework during **scheduled sessions in school after curriculum time. These coursework sessions are usually scheduled on Fridays from 2-5pm.** Students are required to work independently and be self-directed to manage their own work to adhere to the scheduled submission timeline.

**Q2: What is Drawing and Painting?**

**A:** It is an exam where students are given 3 hours to complete an artwork. The question paper will be given three weeks before the exam and students must use that time to complete three to five A3 sheets of preparatory drawings that must be submitted on the day of the examination. Students are required to work independently to manage their own work in order to complete their preparatory drawings on time.

**Q3: Must my child be proficient in different mediums such as Acrylic painting and Watercolour painting?**

**A:** No, the various mediums will be taught to your child. However, it will be advantageous if your child is already equipped with prior knowledge of the skills used in these mediums.

**Q4: Is Art a relevant subject considered for aggregate computation to the Pre-University (i.e. Junior Colleges and Millennia Institute), Polytechnic and ITE courses?**

**A:** Yes, Art is one of the relevant subjects to Pre-University courses, Business-related and Design-related courses in Polytechnics. Otherwise, it can be considered as one of the Best 2 Other Subjects for aggregate computation in Polytechnics. For ITE courses, Art can be considered as one of Best 2 or Best 3 Other Subjects for aggregate computation.

## 8.14 Music

Music is offered at the upper secondary level as an option to musically inclined students who wish to pursue a deeper and more comprehensive study in the subject. The syllabus is organised into three papers: Music Studies, Creating and Performing. Music Studies is organised by Areas of Study, which covers a wide range of musical styles and traditions to guide the aural exploration through listening, analysis, creating and performing. Creating and Performing provide the necessary breadth of musical and reflective skills, equipping candidates with their articulation of their musical understanding, intentions and evaluation of their musical choices in their compositions and performances.

The Areas of Study represent a broad selection of significant genres and traditions for musical study at the O-Level. Each Area of Study is situated within specific musical traditions. Candidates will understand and appreciate the historical, social and cultural contexts of music from the following Areas of Study: Western Classical, Asian Music, Jazz, and Popular Music.

The aims of the syllabus are to:

- Develop critical thinking and music creativity
- Develop communication, collaborative and interpretative skills in music
- Develop perception and awareness of musical cultures and traditions, both local and global
- Develop independent learners with inquiring and innovative minds through reflective practices in music
- Provide the basis for an informed and lifelong appreciation of music

### **Scheme of Assessment at National Examination**

The following table provides a summary of the weighting and assessment of the examination. All Music candidates are required to take all the compulsory papers listed in the table below:

Paper	Title	Weighting	Assessment Format	Duration	Marks
1	Music Studies	40%	Written Examination	1.5 hours	<b>75</b>
2	Creating	30%	(i) Coursework	9 weeks, 5 hours of supervision time	<b>40</b>
			(ii) Reflection Notes		<b>10</b>
3	Performing	30%	(i) Recital	5-10 minutes	<b>40</b>
			(ii) Reflection Notes	-	<b>10</b>

## FAQs

**Q1: Is Music offered in Junyuan Secondary School?**

**A:** No, Music is not offered within Junyuan Secondary School. However, your child may still apply to study Music in one of the O-level music centres. Music classes will be held weekly at the selected music centres in the afternoon. The duration of each class is approximately 3 hours. Successful applicants will be invited to choose their centres in September.

**Q2: Can my child take Music at O-level instead of other elective subjects like D&T, Art?**

**A:** No, Music can only be taken as an additional subject and cannot be used to replace any other subjects taken in Junyuan Secondary School.

**Q3: Do we submit our application together with the other subjects at the end of the year?**

**A:** No, application to study Music at O-Level can be done separately online with the uploading of all the necessary supporting documents at <https://go.gov.sg/2023olmcourse> by the 15 July 2022, as stipulated by MOE. You may get more information on the application procedure from the school's music coordinator.

**Q4: Who can apply for the O-Level Music Course?**

**A:** The O-Level Music course is for students with a strong interest to develop their knowledge, skills and understanding of music beyond the foundations laid by the primary and lower secondary music syllabus. It is also suitable for students who have musical performance background from experiences in CCAs, school-based music programmes or external music-related activities. As this is a two-year course where students will take the O-Level Music or Higher Music exams at the end, application for the course commencing in 2023 is only open to students who will be in Sec 3 in 2023.

**Q5: What should I expect in the selection exercise?**

**A:** There are two components to the Selection Exercise:

- Component 1: Audition (online submission)
- Component 2: e-Listening test (in person)

All applicants are required to complete both Components 1 and 2. Applicants must meet the requirements for both components to qualify for the course.

**Q6: Do I still need to complete both components if I already have external certifications in practical and theory?**

**A:** Yes, ALL applicants must complete both components regardless of whether they have attained certifications from external examination boards.

## 9. Subject Information (Normal Technical)

## 9. Subject Information (Normal Technical)

### 9.1 English Language (EL) (Compulsory Subject)

By the end of their Secondary education, pupils will be able to achieve functional fluency in English as a result of their development in the following areas: 1. Listen, read and view critically and with accuracy and understanding a wide range of literary and informational/functional texts from print and non-print sources. 2. Speak, write and represent in internationally acceptable English (Standard English) that is grammatical, fluent, mutually intelligible and appropriate for different purposes, audiences, contexts and cultures. 3. Understand and use internationally acceptable English (Standard English) grammar and vocabulary accurately and appropriately as well as understand how speakers/writers put words together and use language to communicate meaning.

#### **Scheme of Assessment at National Examination**

GCE 'N' Level Examinations

<b>Component</b>	<b>Weighting</b>
Paper 1 (Writing)	30%
Paper 2 (Language Use and Comprehension)	40%
Paper 3 (Listening)	10%
Paper 4 (Oral Communication)	20%

## 9.2 Mathematics (Compulsory Subject)

The syllabus is intended to provide students with the fundamental mathematical knowledge and skills to prepare them for technical- or service-oriented education. The syllabus consists of three content strands, namely, *Number and Algebra*, *Geometry and Measurement*, and *Statistics and Probability*, and a context strand called Real-World Contexts. Application of mathematics is an important emphasis of the content strands. The approach to teaching should involve meaningful contexts so that students can see and appreciate the relevance and application of mathematics in their daily life and the world around them. Real world contexts are realistic contexts that naturally have practical applications of mathematics, and the mathematics can come from any part of the 'Content'.

The N(T)-Level Mathematics Syllabus aims to enable all students who are bound for post-secondary vocational education to:

- acquire mathematical concepts and skills for real life; to support learning in other subjects and to prepare for vocational education;
- develop thinking, reasoning, communication, application and metacognitive skills through a mathematical approach to problem-solving;
- build confidence in using mathematics and appreciate its value in making informed decisions in real life.

### **Scheme of Assessment at National Examinations**

GCE 'N' Level Examinations

Component	Weighting
Paper 1	50%
Paper 2	50%

### **FAQs**

**Q1: Are students able to enter ITE if they failed the subject?**

**A:** For entry to ITE, the course requirements for majority of the 2-year NITEC courses would be a pass in Mathematics. Students who fail the subject will have limited choices for the ITE programme. More information could be found in the JIEN booklet downloadable from the ITE website.

<https://go.gov.sg/jyssjienbooklet2022>

### 9.3 Mother Tongue Language Basics (BMTL) (Compulsory Subject)

The Mother Tongue Language (MTL) policy requires all students to study their respective official Mother Tongue Language: Chinese, Malay and Tamil. A non-Tamil Indian may choose to offer as his/her Mother Tongue Language (a) Tamil, or (b) a non-Tamil Indian Language such as Bengali, Gujarati, Hindi, Punjabi or Urdu. Nonetheless, there is flexibility in the application of this policy for students who have been away from our school system for some years and who have not kept up with the study of their Mother Tongue Language. Students may apply for exemption from studying their official Mother Tongue Language or to study a non-official language such as French, German or Japanese in lieu of Mother Tongue Language. Applications should be made through the school. Applications will be considered on a case-by-case basis.

The purpose of the learning of Mother Tongue Languages at Junyuan Secondary School is to inculcate in every student the love for the language, and to develop individual to become an effective communicator.

The key approaches to mastering the communication skill is through listening, speaking, reading and writing. Through these approaches, our students are able to sharpen their critical thinking skills, deepen their understanding and also be able to articulate their views effectively.

#### **Scheme of Assessment at National Examination**

GCE 'N' Level Examination

Component	Weighting
Paper 1 – Comprehension [MCQ] + Writing	30%
Paper 2 – e Oral	50%
Paper 3 – Listening Comprehension	20%



## 9.4 Computer Applications (Compulsory Subject)

Through the CPA curriculum, students learn a range of software application, how computer systems and networks work, and basic programming concepts. Students also gain awareness of the ethical, legal and security issues relating to the use of computers. Specifically, the aims of the syllabus are to:

1. acquire skills in using a variety of computer application software and hardware to accomplish tasks and communicate ideas;
2. appreciate the ethical, legal and security issues relating to the use of computers and ICT in society;
3. recognise the impact of ICT on society and people; and
4. develop basic computational thinking and problem-solving skills.

There are six compulsory modules in the subject;

- ☐ Computer Fundamentals (CPF)
- ☐ Media Elements (MEL)
- ☐ Document Processing (DOP)
- ☐ Spreadsheets (SST)
- ☐ Interactive Multimedia Communication (IMC)
- ☐ Animation and Game Making (AGM)

### **Scheme of Assessment at National Examination**

GCE 'N' Level Examination

Component	Weighting
Paper 1 – Written Paper (All modules)	30%
Paper 2 – Practical – MEL (Digital Drawing), DOP, IMC	35%
Paper 3 – Practical – MEL (Video Editing), SST, AGM	35%

## 9.5 Elements of Business Skills (Elective)

This syllabus is an introduction to business through an understanding of business activities, focusing on basic marketing and customer relations, in the context of Singapore. The syllabus intends to provide students with opportunities to develop transferable employability skills and knowledge in the service industry, namely the Travel and Tourism, Hospitality, and Retail industries, which continue to offer employment opportunities accessible to the students. It provides students with the foundational knowledge and skills for further studies in institutes of higher learning and the awareness of prospects of a career in the service industry.

### **Scheme of Assessment at National Examination**

GCE 'N' Level Examination

Component	Weighting
Paper 1 – Written Paper	60%
Paper 2 – Coursework (Conducted from February to May during curriculum hours)	40%

### **FAQs**

**Q1: What skills can my child look forward acquire by the end of the two years?**

- A:** EBS syllabus aims to develop your child to:
- apply concepts in marketing and customer relations to the three industries mentioned earlier;
  - gather, select, interpret, analyse and evaluate information in the investigation of a business;
  - think critically and innovatively to generate solutions and make decisions to improve marketing and customer relations;
  - self-manage and direct personal learning to work independently and collaboratively;
  - communicate effectively; and
  - harness the use of Information and Communication Technologies (ICT) where appropriate.

**Q2: How can my child be value-added in terms of his/her values & attitudes by the end of the two years?**

- A:** EBS syllabus aims to develop the values and attitudes of:
- integrity and responsibility in making decisions;
  - respect and social awareness in managing relationships with others;
  - an enterprising mindset;
  - resilience in overcoming challenges; and
  - passion to pursue lifelong learning.

## 9.6 Science (Elective)

The syllabus is organised around contexts that students can relate to their everyday experiences and the commonly observed phenomena in nature. The contexts are presented as three Core Modules in the Upper Secondary syllabus. They are Gadgets Work Wonders (II), Food Matters and Wonders of My Body (II). These contexts have been chosen because they provide a strong link between the concepts to be learnt and their applications. The topics encompassed by each context are not to be viewed as compartmentalised blocks of knowledge, but rather as interdependent and united through that context.

### **Scheme of Assessment at National Examination**

GCE 'N' Level Examination

Paper	Type of Paper	Duration	Marks	Weightings
1	Multiple Choice	1 hr	40	40%
2	Short-answer or structured	1 hr 15 min	60	60%

Paper 1 (1 h, 40 marks)	Paper 1 will carry 40 marks and consist of 40 compulsory multiple choice items
Paper 2 (1 h 15 min, 60 marks)	Paper 2 will carry 60 marks and consist of a variable number of compulsory short-answer or structured questions. One of the question is a data-response question, requiring candidates to interpret, evaluate or solve problems using data and/or observations. This question will carry 8 – 12 marks.

### **FAQs**

**Q1: Does my child qualify for admission to a NITEC course in culinary arts or nursing if he/she does not take Science at 'NT' level?**

**A:** Science is not an entry requirement for these courses. You may refer to the following for more information.

- <https://www.ite.edu.sg/courses/course-finder/course/nitec-in-asian-culinary-arts>
- <https://www.ite.edu.sg/courses/course-finder/course/nitec-in-western-culinary-arts>
- <https://www.ite.edu.sg/courses/course-finder/course/nitec-in-pastry-and-baking>
- <https://www.ite.edu.sg/courses/course-finder/course/nitec-in-nursing>

## 9.7 Design and Technology (Elective)

This syllabus is designed to lead to an examination for that part of the school curriculum identified as Design and Technology (D&T). It offers an examination for pupils who have followed a course of study that emphasises designing involving research, reasoned application of knowledge and skills in the areas of design and technology

At the upper secondary level D&T, designing and making are dealt with at greater depth and scope. Pupils do research to understand and define user needs, explore and develop design solutions, and prototype their ideas using basic hand tools/equipment/machines. Such learning activities leverage and build on pupils' experiences in design and technology, with a focus on understanding of everyday activities to create possibilities to make life better. In the process, pupils cultivate creative, critical and reflective thinking and develop design related dispositions and skills. It aims to:

- develop confidence, pride and tenacity through exploring real world design opportunities for which ideas are developed
- develop the quality of mindfulness, empathy and sensitivity through improving aspects of their environment in everyday life
- embrace complexities, uncertainties and the inherent social dimension of the design process when exploring design opportunity vis-à-vis design ideas
- cultivate thinking through doodling and sketching/drawing
- experiment and prototype ideas using appropriate materials and tools
- build on their innate curiosity and ability to create
- exercise judgements and make evidence-based decisions of technological, aesthetic and economic nature

In achieving the above aims, pupils also develop safe working habits.

### **Scheme of Assessment at National Examination**

GCE 'N(T)' Level Examination

Component	Weighting
Paper 1 – Written Examination	30%
Paper 2 – Design Project	70%

### **FAQs**

**Q1:** Is Design & Technology a relevant subject in application to Polytechnic courses?

**A:** Design & Technology is one of the relevant subjects in application to Science & Technology courses or Design-related courses in Polytechnics.

**Q2:** What is a Design Project?

**A:** The Design Project comprises of a completed Prototype, Design Journal and Presentation Boards. The question paper will be issued in January and students are expected to work on their Design Project during scheduled sessions in school after curriculum time over 20 weeks for N(T) level. Students are required to work independently and adhere to the scheduled submission timeline.