

NORMAL (ACADEMIC)



2022

SECONDARY 3

SUBJECT COMBINATIONS

Information Booklet

Updated April 2021

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Preface

At the end of Secondary 2 education, all students will be taking part in the Subject Combinations exercise to pursue a particular course from Secondary 3 to Secondary 4/5.

For the Secondary 2 students, choosing N-Level subjects is a significant phase of their Secondary School education. This information booklet is prepared with the objective of assisting parents and their daughters in making an informed decision on the Secondary 3 subject combination that best suits the child.

The information in this booklet is organised to provide general expectations of each N-Level subject, some post-secondary education pathways as well as possible career options for the various combinations of subjects. The information is provided with the best intentions and is accurate based on current knowledge. However, they do not guarantee future prospects in either education or career.

We hope you will find the information booklet useful. If you need further clarification, you may seek assistance from your daughter/ward's Form Teachers. We also welcome feedback to improve the Information Booklet.

On behalf of our teachers, we wish every student a meaningful educational journey in PLMGS(Sec) and beyond.

PART 1: SECONDARY 3 SUBJECT COMBINATIONS EXERCISE

The Secondary 3 Subject Combinations Exercise is an important step in our students' educational journey. The first two years of education in Secondary School has allowed our students to be exposed to a wide variety of subjects. As the students move towards Secondary 3, they have become better equipped to take on a more specialised course of education. Students have to make a choice on the course, which suits them best based on their competency, interest and aspirations. The streaming process as detailed below is put in place to guide students' decisions in choosing their subject combinations.

1.1: Process

- Parents' briefing slides to be shared online in April 2021.
- Using this information booklet, students are advised to have an active discussion with their parents.
- Upon release of the overall results, students are given the Secondary 3 Subject Combinations Option Form. (October 2021)
- A subject combination will be allocated to a student based on the following criteria:
 1. Competency of the student based on her results. **(Merit)**
 2. Demand for the Subject Combination of her choice. **(Choice)**
- Students are to submit the Subject Combinations Options Form to their Form Teachers after collecting their overall results. (October 2021)
- Students will receive the outcome of the streaming exercise. (October-November 2021)

1.2: Secondary 3 Subject Combinations 2022

We understand that there are students who are able to handle a more demanding educational course yet maintain active participation in their CCA, school and other enrichment programmes. To stretch their potential to the fullest, these students will be allowed to offer one additional subject, such as Art and Music in the afternoon.

While the school will always try to cater to the needs and interest of our students, we would like to reiterate that the deciding factors will still be your daughter/ward's overall results and her aptitude towards the subjects chosen. However, constraints in school resources such as manpower and physical facilities are also part of the important factors for consideration in planning and allocating the subjects to our students.

OPTIONS FOR SEC 3 NORMAL (ACADEMIC) SUBJECT COMBINATIONS IN 2022

	Option 1 a / b	Option 2 a / b	Option 3 a / b	Option 4 a / b	Option 5 a / b	Option 6 a / b
<u>Compulsory Subjects</u>	English Language	English Language	English Language	English Language	English Language	English Language
	Mother Tongue	Mother Tongue	Mother Tongue	Mother Tongue	Mother Tongue	Mother Tongue
	Mathematics	Mathematics	Mathematics	Mathematics	Mathematics	Mathematics
	Social Studies & Literature	Social Studies & Literature	Social Studies & Literature	Social Studies & Literature	Social Studies & Literature	Social Studies & Literature
	Pure Geography	Pure Geography	Pure Geography			
<u>Choice within options</u> Combined Science	Combined Science a. (Physics, Chemistry) or b. (Biology, Chemistry)	Combined Science a. (Physics, Chemistry) or b. (Biology, Chemistry)	Combined Science a. (Physics, Chemistry) or b. (Biology, Chemistry)	Combined Science a. (Physics, Chemistry) or b. (Biology, Chemistry)	Combined Science a. (Physics, Chemistry) or b. (Biology, Chemistry)	Combined Science a. (Physics, Chemistry) or b. (Biology, Chemistry)
Other Elective subjects	O-Level Nutrition & Food Science	Principles of Accounts	Additional Mathematics	O-Level Nutrition & Food Science	Principles of Accounts	Additional Mathematics
Total subjects	7 subjects	7 subjects	7 subjects	6 subjects	6 subjects	6 subjects

Points to note for all

- Students are eligible to take the Out-of-Stream subjects (ie. O-Level subjects) if they meet the school-based criteria.
- Out-of-Stream subjects that are being offered at O-Level include English Language, Mother Tongue Language, Mathematics, Science, Nutrition & Food Science, Humanities, Art and Music.
- O-Level Art and Music lessons are additional subjects. The lessons will be conducted in the afternoon and can be taken with any subject combination.
 - To be eligible for Art, students should obtain a minimum of 65% for Sec 2 Art.
 - To be eligible for Music, students should pass an audition cum interview.
- To be eligible for N(A)-Level Additional Mathematics, students should either obtain 60% in Sec 2 Express Mathematics (SBB) or obtain a minimum 70% in Sec 2 Normal (Academic) Mathematics.

1.3: “How to decide” Guide

What must I consider when choosing the subject combination that suits me best?

As you move on your journey from Lower Secondary to Upper Secondary, you will need to make some important choices. One of them is the subject combination that you would like to take in Secondary 3. This is an important decision because it will affect the next few years of your school life, as well as the future educational and career paths that you would like to take.

Here are a few matters you should consider while deciding on which subject combination suits you best:

Competency in the subject – Competency refers to the ability of an individual to handle the requirements of a subject. Some of us have an innate ability in certain subjects or areas. For example, some find Mathematics a subject easy to manage; they tend to find it quite easy to solve difficult mathematical questions. However, there are some who will take a little longer to grasp a mathematical concept. Competency in the subject is important because it suggests that the students are able to manage difficult topics at the Upper Secondary level.

Interest in the subject – Many students tend to excel in the subjects they are interested in. They go beyond the classroom to read up on information related to the subject. It is important to make sure that it is the subject content that you like and not the teaching style of the subject teacher.

Aspirations – Planning for a career at Secondary 2 is not too far-fetched. Many a time, career prospects are affected by the subject combination you choose now. If you find planning a career difficult, you might want to think about the jobs you definitely do not want and that may help to narrow down your options. Consider your plans for post-secondary education. (Would you like to further your education in junior college, polytechnic or specialised schools?)

Aptitudes and Abilities – Consider the talents and skills you have. For example, are you musically or artistically talented?

PART 2: SUBJECT INFORMATION

The following information on the respective subjects offered in Upper Secondary is extracted from the N-Level syllabi provided by MOE.

2.1 ENGLISH

SCHEME OF ASSESSMENT - NORMAL (ACADEMIC)

Paper	Type of Paper	Duration	Marks	Weighting
1	Writing	1h 50min	70	35%
2	Comprehension	1h 50min	50	35%
3	Listening	45min	30	10%
4	Oral Communication	20min	30	20%
	Total		180	100%

SUBJECT CONTENT FOR NORMAL (ACADEMIC) STREAM

Paper 1 Writing	<p><u>Section A</u> (Editing) Candidates identify and edit grammatical errors in a short written text.</p> <p><u>Section B</u> (Situational Writing) Candidates write 180 – 250 words on a given situation, which will involve viewing a visual text.</p> <p><u>Section C</u> (Continuous Writing) Candidates write 250 – 400 words on one of the four topics set.</p>
Paper 2 Comprehension	<p><u>Section A</u> Candidates respond to questions based on Text 1, a visual text.</p> <p><u>Section B</u> Candidates respond to a variety of questions based on Text 2, which is a narrative or a recount.</p> <p><u>Section C</u> Candidates respond to a variety of questions based on Text 3, a non-narrative text, and write an 80-word response to a summary writing task.</p>
Paper 3 Listening	<p><u>Section A</u> Candidates respond to a variety of listening tasks based on a number of audio recordings, which the candidates will hear twice.</p> <p><u>Section B</u> Candidates listen to an audio recording and do a simple note-taking exercise. Candidates will hear the recording only once.</p>
Paper 4 Oral Communication	<p>The two parts are thematically linked.</p> <p>Part 1 – Reading Aloud</p> <p>Part 2 – Spoken Interaction</p>

2.2 MOTHER TONGUE LANGUAGE

SCHEME OF ASSESSMENT

Normal Academic Chinese Language (CL): 普通学术课程——华文

Examination Syllabus: 考试大纲

Paper	Type of Papers	Marks (Weighting)	Duration
1 试卷一	Composition 作文 (记叙文、议论文和说明文) (4 选 1)	40 marks (20%)	2 h
	Email writing 实用文 (私人电邮、公务电邮) (2 选 1)	20 marks (10%)	
2 试卷二	Language use and Comprehension 语文理解与运用： <ul style="list-style-type: none">• 综合填空 (多项选择)• 阅读理解一 (多项选择)• 阅读理解二 (自由作答)	60 marks (30%)	1 h 30 min
3 试卷三	Oral 口试 <ul style="list-style-type: none">• 朗读短文• 会话：看录像短片，然后跟主考员进行对话	60 marks (30%)	10-15 min
	Listening Comprehension 听力理解	20 marks (10%)	30 min

Normal Academic (ML) Examination Syllabus

Paper	Type of Papers	Marks (Weighting)	Duration
1	Composition	40 marks (20%)	2 h
	E-mail writing	20 marks (10%)	
2	Language use and comprehension <ul style="list-style-type: none"> • Bahagian A (Imbuhan, peribahasa & golongan kata) • Bahagian B (Pemahaman 1: 2 teks pendek dari bahan autentik) • Bahagian C (Pemahaman 2:1 teks naratif) 	60 marks (30%)	1 h 30 min
3	Oral <ul style="list-style-type: none"> • Reading (20/10%) • Conversation – Video clips (40/20%) 	60 marks (30%)	10-15 min
	Listening Comprehension	20 marks (10%)	30 min

Normal Academic (வழக்கநிலை ஏட்டுக்கல்வி)
(TL) Examination Syllabus – (தேர்வுக்குரிய கூறுகள்)

Paper	Type of Papers	Marks (Weighting)	Duration
தாள் 1	<p>'அ' பிரிவு Email Writing</p> <p>மின்னஞ்சல் எழுதுதல் (1.உறவுமுறை 2.தொழில்முறை) (2 வினாக்களுள் 1-க்கு விடையளித்தல்)</p>	20 Marks (10%)	2 h
	<p>'ஆ' பிரிவு Composition</p> <p>கட்டுரை எழுதுதல் (3 வினாக்களுள் 1-க்கு விடையளித்தல்)</p>	40 Marks (20%)	
Paper 2 தாள் 2	<p>Language use, Comprehension மொழிக்கூறுகள் & கருத்தறிதல்</p> <p>'அ' பிரிவு A1 இணைமொழி / மரபுத்தொடர் A2 வாக்கியங்களை முடித்தெழுதுதல் A3 அமைப்புச் சொற்கள்</p> <p>'ஆ' பிரிவு B4 தெரிவுவிடைக் கருத்தறிதல் (5 வினாக்கள்)</p> <p>'இ' பிரிவு C4 சுயவிடைக் கருத்தறிதல் (3 சொற்பொருள் உட்பட 8 வினாக்கள்)</p>	60 Marks (30%)	1 h 30 min
Paper 3 3	<p>Oral & Listening Comprehension (வாய்மொழியும் கேட்டல் கருத்தறிதலும்)</p> <p>பகுதி 1 வாய்மொழி</p> <p>1. வாய்விட்டு வாசித்தல்</p> <p>2. உரையாடல் (ஒளிக்காட்சி ஊக்கக்கூறையொட்டி அமையும்)</p>	60 Marks (30%)	10-15 min
	<p>பகுதி 2 கேட்டல் கருத்தறிதல்</p>	20 Marks (10%)	
			40 Marks (20%)
		20 Marks (10%)	30 min

2.3 MATHEMATICS SYLLABUS A

SCHEME OF ASSESSMENT

Paper	Description	Duration	Marks	Weighting
1	About 25 short questions. All questions are to be answered.	2 hours	80	50%
2	<p><u>Section A</u> 9 to 10 questions of varying lengths. The last question in this section will focus specifically on applying mathematics to a real-world scenario. All questions are to be answered.</p> <p><u>Section B</u> Choose 1 out of 2 questions:</p> <ul style="list-style-type: none"> Each question carries the same number of marks, i.e. either 7 or 8 marks. 1 question will be from Geometry & Measurement strand and 1 question will be from Statistics & Probability strand, based on the underlined content shown in syllabus. 	2 hours	60	50%

SUBJECT CONTENT

Number & Algebra		Geometry & Measurement	
N1	Numbers and their operations	G1	Angles, triangles and polygons
N2	Ratio and proportion	G2	Congruence and similarity
N3	Percentage	G3	Properties of circles
N4	Rate and speed	G4	Pythagoras' theorem and trigonometry
N5	Algebraic expressions and formulae	G5	Mensuration
N6	Functions and graphs	G6	Coordinate geometry
N7	Equations and inequalities	G7	Problems in real-world contexts
N8	Problems in real-world contexts	Statistics & Probability	
		S1	Data analysis
		S2	Probability

Additional Information

Mathematics is a compulsory subject to be offered at GCE O-Level Examination with the following requisite grades for admission to post-secondary institutions:

- Junior Colleges (JC) / Millennia Institute (MI) Admission – At least a D7 in Mathematics
- Polytechnic Admission – At least a C6 for most courses
- ITE Admission for *Higher Nitec* Courses – At least a D7 for most courses

A student who excels in Mathematics will have a good foundation to offer Mathematics in JC / MI at the H1 level. H1 Mathematics provides a foundation in Mathematics for students who intend to enrol in university courses such as Business, Economics and Social Sciences. Students will develop Mathematical thinking and problem-solving skills. The course covers 'Functions & Graphs', 'Calculus' and 'Probability & Statistics'. A major focus of the syllabus will be the understanding and application of basic concepts and techniques of statistics to equip students with the skills to analyse and interpret data, and make informed decisions.

Advice to students who are weak in Mathematics

It is a requisite to obtain a minimum grade of D7 in Mathematics for admission to JC / MI. Otherwise, a student will only be granted conditional admission to JC / MI and is required to re-sit for the Mathematics Papers in the GCE O-Level Examination in the following year. Should a student fail to obtain the requisite grade, she will be transferred from the JC to MI. Should a student fail to obtain the requisite grade by the 2nd year in MI, she will be asked to leave the MI course.

Hence, it is advisable to focus one's efforts to excel in Mathematics and obtain a distinction for computation towards L1R5 than to struggle with the offer of Mathematics and Additional Mathematics with each subject getting a failing or mediocre grade.

2.4 ADDITIONAL MATHEMATICS (NA-LEVEL)

SCHEME OF ASSESSMENT

Paper	Description	Duration	Marks	Weighting
1	13 to 15 questions of varying marks and lengths. All questions are to be answered.	1 hour 45 minutes	70	50%
2	8 to 10 questions of varying marks and lengths. All questions are to be answered.	1 hour 45 minutes	70	50%

SUBJECT CONTENT

Algebra	Geometry & Trigonometry
A1 Equations and inequalities	G1 Trigonometric functions, identities and equations
A2 Indices and surds	G2 Coordinate geometry in two dimensions
A3 Polynomials	
A4 Binomial expansions	
	Calculus
	C1 Differentiation and integration

Additional Information

To offer Additional Mathematics, a student should obtain an overall mark of 70% for Mathematics in Sec 2. A **strong foundation** in lower secondary Mathematics, **especially in algebra**, will help a student to experience a higher chance of excelling in Additional Mathematics.

For admission to JC / MI

- Additional Mathematics is a **not** a compulsory subject to be included in the computation of L1R5.
- A student does **not** need to offer Additional Mathematics to take up Mathematics at the **H1 level**.
- A student who wishes to offer Mathematics at the **H2 level** should have taken Additional Mathematics. H2 Mathematics prepares students adequately for university courses including Mathematics, Physics and Engineering where more Mathematics content is required. The course covers 'Functions & Graphs', 'Sequences & Series', 'Vectors', 'Complex Numbers', 'Calculus', 'Permutations & Combinations' and 'Probability & Statistics'. Students will learn to analyse, formulate and solve different types of problems. Students will also learn to work with data and perform statistical analyses.

For admission to Polytechnic

- The offer of Additional Mathematics is **not** compulsory, as the offer of Mathematics **OR** Additional Mathematics will provide a foundation in Mathematics-related courses, such as Engineering, Applied Sciences, Health Sciences, Business & Management, Information & Digital Technologies and Media & Design.

2.5 COMBINED HUMANITIES

INTRODUCTION

The Humanities subject is a compulsory subject for the GCE N-Level Examinations.

For 2022, students will have to take the compulsory Social Studies component with Literature.

SUBJECT COMBINATIONS

Students will have to take Paper 1 (Social Studies) with Literature.

First Humanities Subject (compulsory)		Second Humanities Subject
Paper 1: Social Studies (compulsory)	Paper 4: Humanities (Literature)	Geography

**2.5.1 HUMANITIES PAPER 1
(SOCIAL STUDIES) 2177/1**

SCHEME OF ASSESSMENT

Paper	Type of Paper	Section A	Section B	Duration	Marks	Weighting
1	Social Studies	1 Source Based Question with 5 parts	Structured Response Question with 2 parts.	1h 45 min	Section A (35m) Section B (15m)	50%

SUBJECT CONTENT

The Singapore Social Studies Curriculum seeks to prepare our students to be citizens of tomorrow by helping them to better understand the interconnectedness of Singapore and the world they live in. Drawing on aspects of society that are of meaning and interest to students, Social Studies seeks to ignite students' curiosity to inquire into real-world issues that concern our lives, and envisions students as informed, concerned and participative citizens, competent in decision making and impassioned to contribute responsibly to the society and world they live in.

Issue	Topic Overview
Issue 1 Exploring Citizenship and Governance	This Issue invites students to begin exploring what it means to be an informed, concerned and participative citizen. Students will deepen their understanding of their roles as citizens and that of the government. This will serve to develop a stronger sense of civic consciousness, enhancing the roles they play as citizens who are rooted in Singapore with a global outlook.
Issue 2 Living in a Diverse Society	This Issue helps students appreciate diversity and the importance of harmony. Students will develop an understanding of who they are as individuals and accept, respect and celebrate diversity as well as common practices and values in a diverse society. This will heighten students' awareness of the need to develop personal and collective responsibility in promoting and maintaining harmony in a diverse society.
Issue 3 Being Part of a Globalised World	This Issue helps students understand and make meaning of their lives in a globalised world where countries, companies and individuals are interconnected and interdependent. Students will explore the impacts of globalisation in three areas: economy, culture and security. Students will therefore appreciate the complex decision-making process behind responses towards the impacts of globalisation. This understanding will lead them in making well-reasoned and responsible decisions as informed, concerned and participative citizens in a globalised world.

2.5.2 HUMANITIES PAPER 2 (LITERATURE)

SCHEME OF ASSESSMENT

Paper	Type of Paper	Section A	Section B	Duration	Marks	Weighting
2	Humanities (Literature)	Set Text (Novel)	Unseen Poetry	1h 40m	50 m	50 %

SUBJECT CONTENT

The Literature Syllabus aims to enable students to discover the joy of reading Literature, appreciate the aesthetic value of language and to explore how the elements of different genres function in literary works to achieve specific effects. Candidates of this paper will be assessed on their ability to demonstrate understanding of the ways in which writers' choices of form, structure and language shape meanings and express their responses clearly and coherently.

Section A: Set Text (25%)	Students will read one set text (Novel) and answer one passage-based or one essay question. There will be a choice of one passage-based question and two essay questions given.
Section B: Unseen Poetry (25%)	There are no prescribed texts. There will be two questions on unseen poetry. Students will answer one question. There are two parts to each question.

ADDITIONAL INFORMATION

Sec 3	Sec 4
<ul style="list-style-type: none"> Set Text (70% completed) Components of Unseen Poetry 	<ul style="list-style-type: none"> Set Text (100% completed) Components of Unseen Poetry

- Both the Express and Normal Students may do the same texts.
- However, assessment is in the form of scaffolded questions for the Normal (Academic) students.
- Over 3 years, Normal (A) Students will be prepared for one set text (novel) and the Unseen component.

2.6 GEOGRAPHY 2246/1 and 2246/2

SCHEME OF ASSESSMENT

Paper	Type of Paper	Duration	Marks	Weighting
1	<ul style="list-style-type: none"> Geographical Investigation (Fieldwork) Structured Question Level Descriptor Marking Question 	1h 40min	50	50%
2	<ul style="list-style-type: none"> Structured Questions Level of Descriptor Marking Question 	1h 30min	50	50%

SUBJECT CONTENT

The N-Level Upper Secondary Geography syllabus comprises **Physical Geography, Human Geography and Geographical Skills and Techniques, including Geographical Investigation**. The Physical Geography topics are Plate Tectonics, Resulting Landforms and Coasts. The Human Geography topics are Geography of Food and Tourism.

(Paper 1) Geographical Investigation and Structured Question	(Paper 2) Structured Questions
<p>Section A <i>One structured question on Geographical Investigation will be set based on following topics.</i></p> <ol style="list-style-type: none"> Coasts (Fieldwork Component) <ul style="list-style-type: none"> coastal processes and their resultant landforms and features coastal management Tourism (Fieldwork Component) <ul style="list-style-type: none"> the global tourism industry impact of the growth of tourism managing the impact of tourism 	<p>Section A <i>Answer two question out of three structured questions.</i> - can be a combination of 2 topics in one of the two structured questions.</p> <ol style="list-style-type: none"> Tectonic Hazards <ul style="list-style-type: none"> plate tectonics and phenomena and landforms associated with plate movements impact of and adaptation to earthquakes
<p>Section B <i>Answer one question out of two questions.</i> - can be a combination of 2 topics in one of the two structured essay questions in section B.</p> <ol style="list-style-type: none"> Coasts <ul style="list-style-type: none"> coastal processes and their resultant landforms and features coastal management Tourism <ul style="list-style-type: none"> the global tourism industry impact of the growth of tourism managing the impact of tourism 	<ol style="list-style-type: none"> Geography of Food <ul style="list-style-type: none"> trends in food production and distribution since 1960 factors affecting intensity of food production development in food production

2.7 COMBINED SCIENCES

2.7.1 SCIENCE (CHEMISTRY/BIOLOGY) 5107 – NORMAL (ACADEMIC)

SCHEME OF ASSESSMENT

Paper	Type of Paper	Duration	Marks	Weighting
3	Multiple Choice (Chemistry)	1h 15min	20	20%
4	Structured questions (Chemistry)		30	30%
5	Multiple Choice (Biology)	1h 15min	20	20%
6	Structured questions (Biology)		30	30%

CONTENT STRUCTURE

SC (BIOLOGY)

Section	Topics
I. Principles of Biology	1. Cell Structure and Organisation
	2. Movement of Substances
	3. Biological Molecules
II. Maintenance and Regulation of Life Processes	4. Nutrition in Humans
	5. Nutrition in Plants
	6. Transport in Flowering Plants
	7. Transport in Humans
	8. Respiration in Humans
III Continuity of Life	9. Reproduction

CONTENT STRUCTURE

SC (CHEMISTRY)

Section	Topics
I. Experimental Chemistry	1. Experimental Chemistry
II. Atomic Structure and Stoichiometry	2. The Particulate Nature of Matter
	3. Formulae and The Mole Concept
III. Chemistry of Reactions	4. Acids, Bases and Salts
IV. Periodicity	5. The Periodic Table
	6. Metals
V. Atmosphere	7. Air
VI. Organic Chemistry	8. Organic Chemistry

(This information from SEAB is accurate as of March 2021)

2.7.2 SCIENCE (PHYSICS/CHEMISTRY) 5105 – NORMAL (ACADEMIC)

SCHEME OF ASSESSMENT

Paper	Type of Paper	Duration	Marks	Weighting
1	Multiple Choice (Physics)	1h 15min	20	20%
2	Structured questions (Physics)		30	30%
3	Multiple Choice (Chemistry)	1h 15min	20	20%
4	Structured questions (Chemistry)		30	30%

CONTENT STRUCTURE

SC (PHYSICS)

Section	Topics
I. Measurement	1. Physical Qualities, Units and Measurement
II. Newtonian Mechanics	2. Kinematics
	3. Dynamics
	4. Mass, Weight and Density
	5. Turning Effect of Forces
	6. Pressure
	7. Energy, Work and Power
	III. Thermal Physics
9. Transfer of Thermal Energy	
10. Thermal Properties of Matter	
IV. Waves	11. General Wave Properties
	12. Electromagnetic Spectrum
	13. Sound
V. Electricity and Magnetism	14. Current of Electricity
	15. D.C. Circuits
	16. Practical Electricity

CONTENT STRUCTURE

SC (CHEMISTRY)

Section	Topics
I. Experimental Chemistry	1. Experimental Chemistry
II. Atomic Structure and Stoichiometry	2. The Particulate Nature of Matter
	3. Formulae and The Mole Concept
III. Chemistry of Reactions	4. Acids, Bases and Salts
IV. Periodicity	5. The Periodic Table
	6. Metals
V. Atmosphere	7. Air
VI. Organic Chemistry	8. Organic Chemistry

(This information from SEAB is accurate as of March 2021)

2.8 NUTRITION & FOOD SCIENCE

GCE O-LEVEL NUTRITION & FOOD SCIENCE

The aims of the Nutrition & Food Science syllabus are as follows:

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

SCHEME OF ASSESSMENT

Food & Nutrition GCE O-Level

Paper 1: 40% (100m)

Paper 2: 60% (80m)

Paper 1 (2 h)

Written paper. Answer all questions.

Section A: Multiple Choice Questions (15m)

Section B: Short Answer Questions & Data Response Questions (55m)

Section C: Open Ended Questions (30m)

Paper 2: Coursework (60%)

Research	10m
Decision Making	8m
Investigation	
▪ Plan	6m
▪ Conduct	8m
▪ Apply	8m
Planning:	8m
Execution:	
▪ Organisation & Management	6m
▪ Manipulation	10m
▪ Product & Presentation	8m
Evaluation:	8m
Sub-total:	80m

Entry Requirements

- At least a pass in Food and Consumer Education in Secondary 2

Demands of the Syllabus

- Good work ethics and time management skill
- Using computer and internet to do coursework

2.9 MUSIC (for selected Express and N(A) students only)

GCE O-LEVEL MUSIC

Students will be developed in the following areas during their weekly lessons:

- Critical thinking and musical creativity
- Communicative and interpretative skills in music
- Perception and awareness of musical cultures and traditions, both local and global
- An informed and lifelong appreciation of music

SCHEME OF ASSESSMENT

Component 1: Music Studies (40%)

- 1.5-hour written paper
- Aural perception skills, knowledge and understanding of Western, Jazz, Popular Music and Asian Music genres
- Candidates are expected to use accurate technical vocabulary in all their answers

Component 2: Creating (30%)

- Part 1: Coursework requires candidates to submit one composition in response to one of the six stimuli
- Part 2: Reflection Notes of 400 to 500 words

Component 3: Performing (30%)

- Part 1: Performing a 10-minute recital to perform two contrasting pieces
- Part 2: Reflection Notes of 400 to 500 words

GCE O-Level Higher Music

- Candidates who offer GCE O-Level Higher Music will need to do 1 out of 3 options as follows on top of the GCE O-Level Music components:
 - Research Essay: 1500 – 2000 words of individual inquiry into a subject of candidate's own choice
 - Higher Creating: 6 minutes of music composition portfolio and programme notes
 - Higher Performing: 2 additional musical pieces between 8 and 12 minutes followed by 3 minutes of viva voce to assess candidates' understanding of the music they have performed

Entry Requirements

- All applicants must sit for a Selection Test
- All applicants must undergo an Interview to evaluate suitability

Demands of the Syllabus

- Study music in greater depth – students must listen to a wide range of music (e.g. listen to CDs and attend concerts etc.)
- Private instrumental / vocal tuition with a tutor outside of school hours (in preparation for the Performing Component)
- Participate in musical activities (e.g. Lunchtime concerts, performing arts CCA etc.)

2.10 ART (for selected Express and N(A) students only)

GCE O-LEVEL ART

Students are equipped to apply the following 5 domains during their weekly lessons:

- Gathering and Investigation of Information
- Exploration and Development of Ideas/Concepts
- Aesthetic Qualities
- Selection and Control of Materials and Technical Processes
- Personal Response

SCHEME OF ASSESSMENT

Candidates taking **GCE O-Level Art** will be required to offer the following papers:

Paper	Description	Examination Duration	Weighting
Paper 1	Coursework	Not Applicable	60%
Paper 2	Drawing and Painting	3 hours	40%

Paper 1: Coursework

For the O-Level Coursework (Paper 1), candidates must submit **8 A2 size** preparatory boards (single-sided) together with the final Artwork.

Paper 2: Drawing and Painting

The topics for the O-Level Drawing and Painting exam (Paper 2) are released **3 weeks** prior to the Drawing and Painting 3 hour exam. For the O-Level Drawing and Painting exam (Paper 2), candidates must submit 5 A3 size preparatory boards (double-sided) together with the drawing and painting artwork they will sit for. The A3 size preparatory boards are to be prepared and ready **before** the day of the drawing and painting exam.

Entry Requirements

- At least 65 marks (overall) for Sec 2 Art and pass a Selection Test
- Right aptitude and attitude for Art
- An inquiring mind, a spirit of experimentation and a passion for the visual arts

Demands of the Syllabus

The Art Syllabus requires students to:

- Spend a minimum of three hours each week outside of curriculum to hone their sensitivity to materials and processes to develop a firm grounding in both the practical and theoretical aspects of Art and Design
- Attend enrichment activities such as workshops, artists' talks and learning journeys to art galleries and museums organised by the school or MOE
- Participate in art-related competitions to sharpen their skills and participate in school or national exhibitions
- Commit to the rigour and demands of the art curriculum and art development process

2.11 PRINCIPLES OF ACCOUNTS

SCHEME OF ASSESSMENT

Paper	Description	Duration	Marks	Weighting
1	Answer 3 to 4 compulsory structured questions.	1 hour	40	40%
2	Answer 4 compulsory structured questions. <ul style="list-style-type: none"> One question requires the preparation of financial statements for a business for one financial year, which carries 20 marks. A scenario-based question will be part of one of the 3 remaining questions, which carries 5 marks. 	2 hours	60	60%

SUBJECT CONTENT

(1) Accounting and non-accounting information is used to support and facilitate decision-making	(2) Accounting is a language used to represent business activities
1.1 Roles of accounting & accountants	2.1 Types of businesses
1.2 Stakeholders & their decision-making needs	
(3) Accounting is an information system to measure business activities.	2.3 Elements of Financial Statements
3.1 Accounting theories	2.4 Accounting Equation
3.2 Accounting information system and accounting cycle	2.5 Financial statements
3.3 Understanding double-entry recording system	2.6 Income and Expenses
3.4 Internal controls	2.7 Assets
	2.8 Liabilities
	2.9 Equities
	2.10 Correction of errors

Additional Information

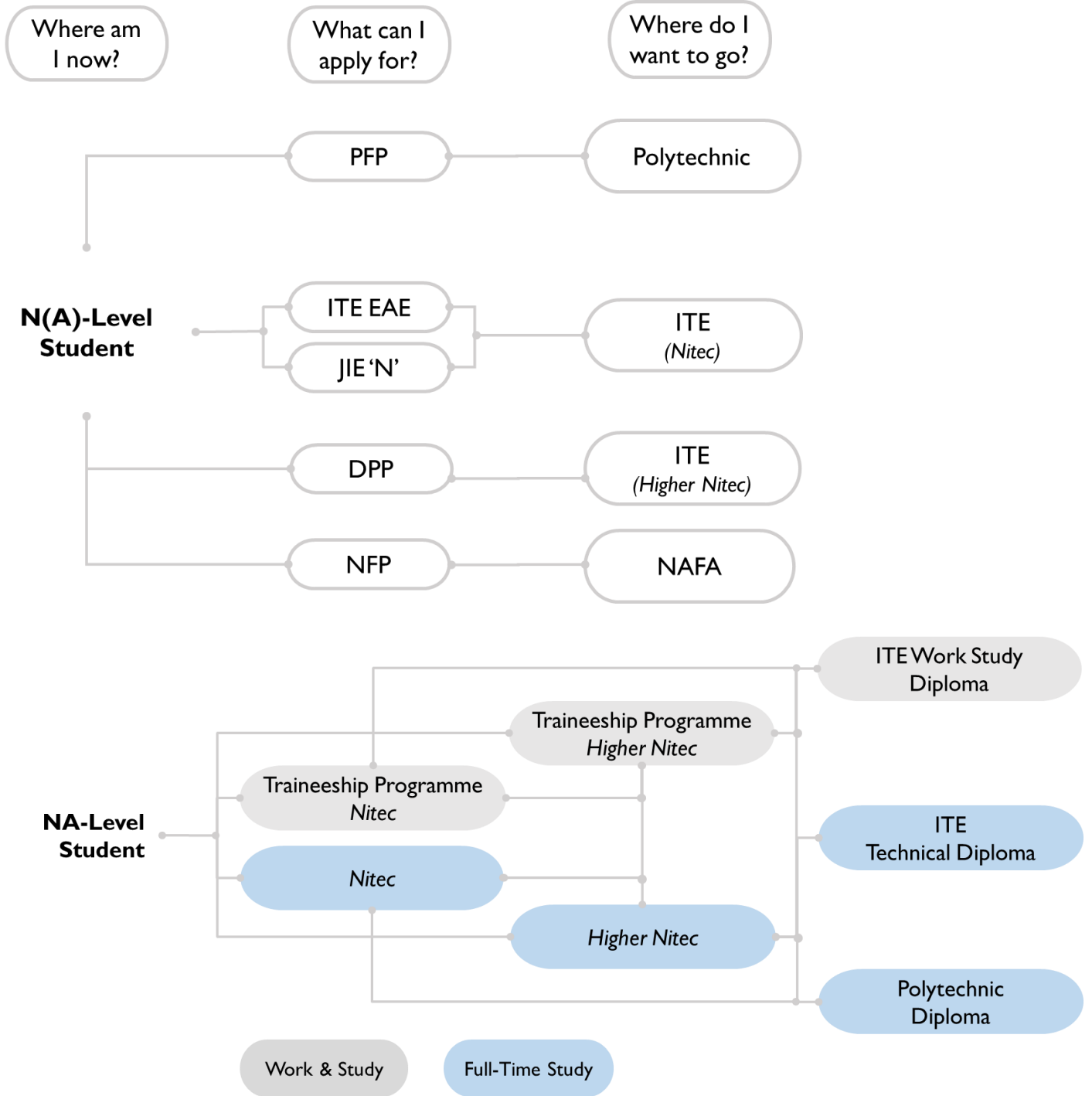
Accounting is an information system based on generally accepted accounting principles. It involves the recording and processing of business transactions, and communicating the information to stakeholders. The accounting information is used to evaluate business performance and facilitate decision-making. What sets the accountancy profession apart is the responsibility to act in the public's interest.

POA is designed to teach age-appropriate and relevant accounting knowledge, skills and values. In addition, students will understand how businesses use accounting and non-accounting information to make decisions. Through the subject, they will acquire transferrable skills that they can apply in their daily lives.

POA forms part of a broad-based education to equip students with strong fundamentals for future learning.

PART 3: INFORMATION

3.1 INFORMATION ON PSEI EDUCATION PATHWAYS



Course Prospectus: Information on Course Overview, Entry Requirements, Education Progression, Career Prospects etc.

ITE Course Prospectus for Nitec and Higher Nitec courses	Joint Portal for the Polytechnics in Singapore
Look under 'Progression Opportunities' for each <i>Nitec</i> course for progression to <i>Higher Nitec</i> and/or Polytechnic, subject to requirements	Search for courses offered by all the polytechnics categorized into nine clusters.
https://bit.ly/ITE-Prospectus2021	http://www.polytechnic.edu.sg/

School Admission: Information on how to gain entry – How to Apply, Entry Requirements and FAQs

Admission Exercise	ITE Early Admission Exercise [ITE-EAE]	Joint Intake Exercise JIE 'N'	Joint Intake Exercise JIE 'H'/DPP*	Poly Foundation Programme [PFP]	Joint Intake Exercise Traineeship Training System
Admission Period	Before release of N Level results [Middle / End May]	Upon release of N Level results [Dec]	Upon release of N Level results [Dec & Jan]	Upon release of O Level results [Jan]	Upon release of N level results [Dec]
Information	Conditional offer based on aptitude and interests prior to receiving GCE NT/NA/O level examination results	Refer to JIE Admission Booklet for details	Refer to DPP website for Overview, Courses Offered, Eligibility, Mapping of Higher Nitec courses to Polytechnic Diplomas, FAQ.	Refer to website for Overview, Courses Offered, Eligibility, FAQ.	Work and Study Programme. Refer to website for Overview, Courses Offered, Eligibility and Application Procedure.
Website	https://bit.ly/ITE-EAE_Nitec	https://bit.ly/JIE-Booklet2021	https://bit.ly/ITE-DPP	https://bit.ly/POLY-PFP	https://bit.ly/ITE-Traineeship-Prog

REQUIREMENTS FOR ADMISSION PROGRAMMES

Polytechnic Foundation Programme [PFP]

Eligibility Criteria: ELMAB3* ≤ 12 (Before CCA bonus point(s) deduction)

Group 1		Group 2	
Subject	Minimum Required Grade	Subject	Minimum Required Grade
English Language [Syll A]	3	English Language [Syll A]	2
Math [Syll A/Additional]	3	Math [Syll A/Additional]	3
One of the following subjects: <ul style="list-style-type: none"> ▪ Design & Technology ▪ Food & Nutrition ▪ Science (Chem/Bio) ▪ Science (Phy/Bio) ▪ Science (Chem/Phy) 	3	One of the following subjects: <ul style="list-style-type: none"> ▪ Art ▪ Lit in English ▪ History ▪ Combined Humanities ▪ Geography ▪ Principles of Accounts 	3
Any two other subjects excluding CCA	3	Any two other subjects excluding CCA	3

Direct-entry-scheme to Polytechnic Programme [DPP]

Eligibility Criteria: ELMAB3* ≤ 19 (Before CCA bonus points deduction)

For Applied Science, Engineering and Info-Communications Technology Courses:		For Business and Services Courses:	
GCE N-Level Subjects	Minimum Required Grade	GCE N-Level Subjects	Minimum Required Grade
English Language [Syll A]	4	English Language [Syll A]	3
Math [Syll A/Additional]	4	Math [Syll A/Additional]	4
Any other 3 subjects Excluding CCA	5	Any other 3 subjects Excluding CCA	5

Progression to Secondary 5

Eligibility Criteria:

- (i) **ELMAB3* ≤ 19** (Before CCA bonus points deduction)
(ii) **At least a Grade 5** for the subjects used in ELMAB3 computation

*: ELMAB3 – English, Mathematics & Best 3 Subjects

3.2 Junior College (JC), Millennia Institute (MI), Polytechnic Education & Institute of Education (ITE)

Information on Joint Admissions Exercise can be found at <https://www.moe.gov.sg/post-secondary/admissions/jae>

Or simply scan the QR-code on the right with an Internet-enabled mobile device.



3.3 Contact Us

School General Office Tel: 62816606

Our School Website: www.plmgss.moe.edu.sg

IP Dean

<i>Mr Lee Wei Te</i>	<i>lee_wei_te@moe.edu.sg</i>
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Year Head

<i>Ms Lim Lin Lin</i>	<i>lim_lin_lin@moe.edu.sg</i>
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Year Head (Lower Secondary)

<i>Mr Wong Khai Yu</i>	<i>wong_khai_yu@moe.edu.sg</i>
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Sec 2 Year Coordinator

<i>Mdm Nur Zetty</i>	<i>nur_zetty_abd_kadir@moe.edu.sg</i>
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Sec 2 Asst Year Coordinator

<i>Ms Eileen Sin</i>	<i>eileen_sin_yu_ling@moe.edu.sg</i>
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Sec 2NA Form Teachers

Class	Teachers	Email
2.6	<i>Ms Natasha Nadia</i>	<i>natasha_nadia_razman@moe.edu.sg</i>
	<i>Mrs Shirley Sim</i>	<i>chua_ai_ping_shirley@moe.edu.sg</i>
2.7	<i>Mdm Durka</i>	<i>durka_kuppa_balakrishnan@moe.edu.sg</i>
	<i>Miss Ch'ng Lee Yoong</i>	<i>chng_lee_yoong@moe.edu.sg</i>
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