Bukit Merah Secondary School

Secondary 2 Subject Combination Information Kit

For 2027

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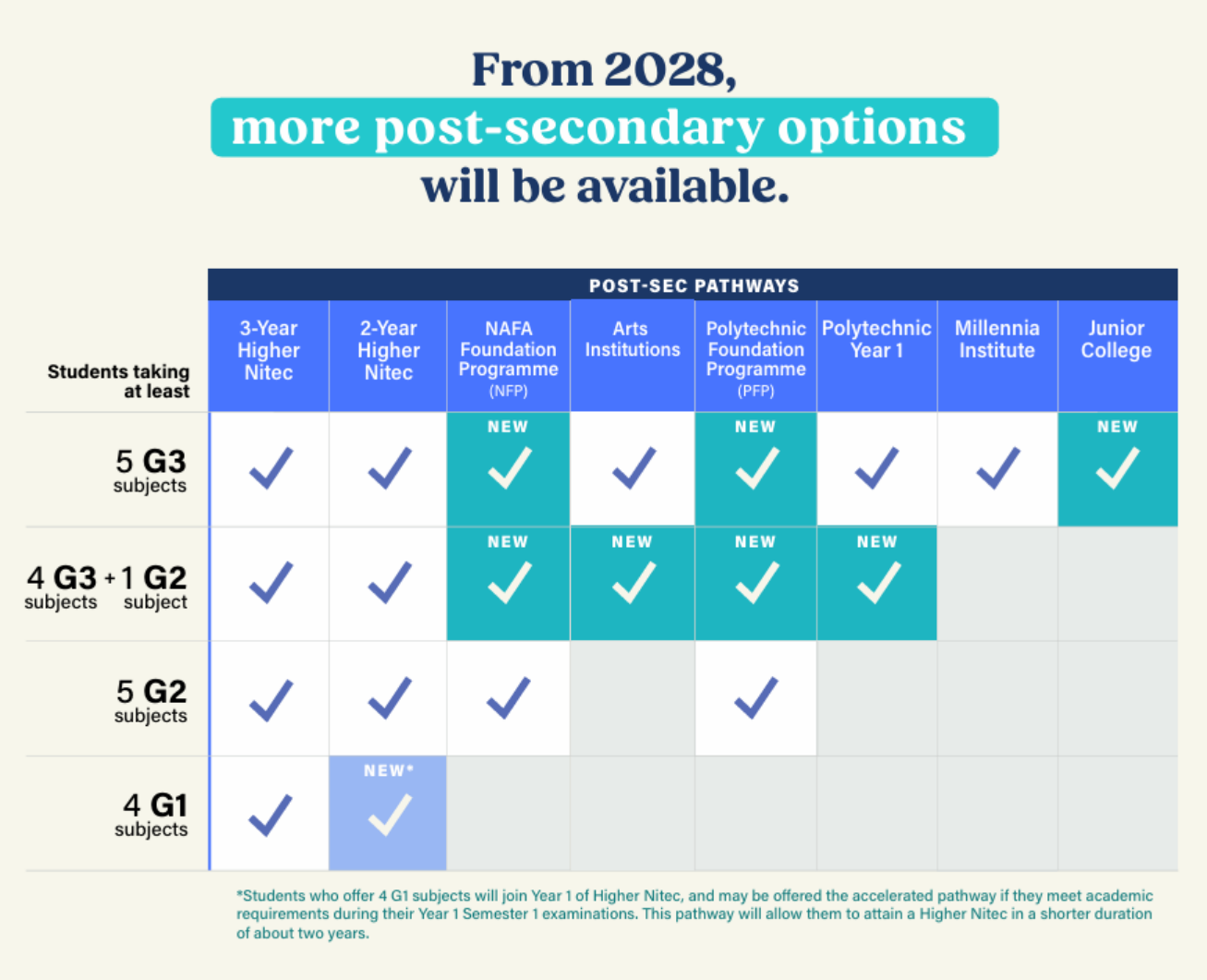
Post Secondary Pathway

Overview



Source: https://www.moe.gov.sg/api/media/433a1904-b166-437f-bcf6-0fc8b2abd8eb/subject-level-requirements-post-sec.pdf

Admission to Junior Colleges / Millennia Institute

For: Students taking **at least 5 G3 Subjects**

To be eligible for admission to a junior college (JC) or Millennia Institute (MI), you must meet these criteria:

- L1R4 gross aggregate score must not exceed:
    - 16 for JC admission
    - 20 for MI admission
- Meet the grade requirements for specific subjects:

Subject	Grade
G3 English Language	A1 to C6
G3 Mathematics or G3 Additional Mathematics	A1 to D7
Any 1 Mother Tongue Language (MTL)	MTL: G3: A1 to D7 G2: 1 to 5 G1: A to D Higher MTL at G3: A1 to E8

Aggregate score computation

All subjects used in aggregate score computation for JC and MI admissions must be taken at G3.

Component	Subject
L1	G3 English or Higher Mother Tongue Language
R1	Any 1 best-scoring G3 subject from **Humanities**
R2	Any 1 best-scoring G3 subject from **Mathematics or Science**
R3	Any 1 best-scoring G3 subject from **Humanities, Mathematics or Science**
R4	Any 1 best-scoring G3 subject

Bonus Points

The bonus points are subtracted from the L1R4 gross aggregate score to obtain the net aggregate score for posting. Bonus points are capped at 3 points from a combination of any of these types:

Type of Bonus Points	Points
CCA Grade	Excellent: 2 Good: 1
EL and HMTL Grade • A1 to C6 for both subjects	2
Chinese/Malay (Special Programme) or Bahasa Indonesia Grade • A1 to C6	2
Affiliated JC	2
Chinese, Malay or Tamil Language Elective Programme	2 (additional 2 bonus points if you applied and got selected for one of the programmes at a JC)

Admission to Polytechnic Year 1

For: Students taking **at least 5 G3 Subjects / 4 G3 Subjects + 1 G2 Subject**

To be eligible for admission into a polytechnic diploma course, you must meet these 2 criteria:

1. ELR2B2 net aggregate score must not exceed 22. For Diploma in Nursing, ELR2B2-C net aggregate score must not exceed 24.
2. Meet the minimum entry requirements (MER) of the course that you are applying for.

Aggregate score computation

ELR2B2	Subject
EL	G3 English Language
R1	Any 1 best-scoring G3 relevant subject*
R2	Any 1 best-scoring G3 relevant subject*
B1	1st best-scoring G3 subject
B2	2nd best-scoring subject can be taken at either G2 or G3 level. Computed using G2 equivalent grade.

Refer to https://www.moe.gov.sg/coursefinder?journey=Polytechnics for MER of specific courses.
Revisit the pages in mid-2027 for updated course information specific to 2028 admission.

If you are using 2 G3 subjects for B1 and B2 requirements, the subject with the better grade will be used for B1 and the other G3 grade will be mapped to G2 equivalent grade for B2.

Mapping of G3 grade to G2 grade:

G3 Grade	G2 Grade
A1, A2, B3	1
B4, C5, C6	2
D7	3
E8	4

G3 grade 9 and G2 grade 5 and 6 cannot be used for ELR2B2 aggregate score computation.

Bonus Point System

The bonus points are subtracted from your gross aggregate scores to obtain the respective net aggregate scores to assess course eligibility and for posting:

Type of Bonus Points	Points
CCA Grade	Excellent: 2 Good: 1

Admission to Polytechnic Foundation Programme (PFP)

For: Students taking
at least 5 G2 Subjects

To be eligible for admission into a cluster offered in Polytechnic Foundation Programme (PFP), you must meet these 2 criteria:

1. ELMAB3 gross aggregate score computed based on G2 equivalent grade must not exceed 12.
2. Meet the minimum entry requirements (MER) of the cluster that you are applying for.

Aggregate score computation for PFP cluster

ELMAB3	Subjects using G2 equivalent grade
EL	English Language
MA	Mathematics/Additional Mathematics
B1	1st best-scoring subject
B2	2nd best-scoring subject
B3	3rd best-scoring subject

*Refer to https://pfp.polytechnic.edu.sg/PFP/pfp_eligibility.html for the cluster MER

ELMAB3 gross aggregate score is computed using G2 equivalent grades only.

If you have taken subjects at G3 level, the G3 grades will be mapped to equivalent G2 grades.

Mapping of G3 grade to G2 grade:

G3 Grade	G2 Grade
A1, A2, B3	1
B4, C5, C6	2
D7	3
E8	4

G3 grade 9 and G2 grade 5 and 6 cannot be used for ELMAB3 aggregate score computation for PFP admission.

Bonus points

The CCA bonus points are subtracted from your gross aggregate scores to obtain the respective net aggregate scores for posting.

You can get a maximum of 2 bonus points from CCA grade.

Type of Bonus Points	Points
CCA Grade	Excellent: 2 Good: 1

Admission to Institute of Technical Education 2-Year Higher Nitec

For: Students taking **at least 5 G2 Subjects**

To be eligible for admission to a 2-Year Higher Nitec course at the Institute of Technical Education (ITE), you must meet these 2 criteria:

(i) ELMAB3 gross aggregate score computed based on G2 equivalent grade must not exceed 19.

(ii) Meet the minimum entry requirements (MER) of the course that you are applying for.

Aggregate score computation for 2-Year Higher Nitec courses

ELMAB3	Subjects using G2 equivalent grade
EL	English Language
MA	Mathematics/Additional Mathematics
B1	1st best-scoring subject
B2	2nd best-scoring subject
B3	3rd best-scoring subject

ELMAB3 gross aggregate score is computed using G2 equivalent grades only.

If you have taken subjects at G3 level, the G3 grades will be mapped to G2 equivalent grades.

Mapping of G3 grade to G2 grade:

G3 Grade	G2 Grade
A1, A2, B3	1
B4, C5, C6	2
D7	3
E8	4
9	5
-	6

Bonus points

The CCA bonus points are subtracted from your gross aggregate scores to obtain the respective net aggregate scores for posting.

You can get a maximum of 2 bonus points from CCA grade.

Type of Bonus Points	Points
CCA Grade	Excellent: 2 Good: 1

Admission to Institute of Technical Education 3-Year Higher Nitec

For: Students taking
at least 4 G1 Subjects

To be eligible for admission to a 3-Year Higher Nitec course at the Institute of Technical Education (ITE), you must meet these 2 criteria:

(i) Meet the minimum entry requirements (MER) of the aggregate type based on G1 equivalent grade:

- **R2B2**
- **R1B3-A**
- **R1B3-B**
- **R1B3-C**
- **B4**

(ii) Meet the MER of the course that you are applying for.

Aggregate score computation for 3-Year Higher Nitec courses

Each 3-Year Higher Nitec course uses one of these aggregate types to assess course eligibility.

Aggregate Types and subjects	Grade requirements
R2B2 • R1 (1st relevant subject): English • R2 (2nd relevant subject): Mathematics • B1 (1st best subject) • B2 (2nd best subject)	Grade requirement for R1, R2 and B1 subjects: • G3: A1 to E8 • G2: 1 to 5 • G1: A to D No grade requirement for B2 subject
R1B3-A • R1: Mathematics • B1: 1st best subject • B2: 2nd best subject • B3: 3rd best subject	Grade requirement for R1, B1 and B2 subjects: • G3: A1 to E8 • G2: 1 to 5 • G1: A to D No grade requirement for B3 subject
R1B3-B • R1: Mathematics or Science • B1: 1st best subject • B2: 2nd best subject • B3: 3rd best subject	Grade requirement for R1, B1 and B2 subjects: • G3: A1 to E8 • G2: 1 to 5 • G1: A to D No grade requirement for B3 subject
R1B3-C • R1: English • B1: 1st best subject • B2: 2nd best subject • B3: 3rd best subject	Grade requirement for R1, B1 and B2 subjects: • G3: A1 to E8 • G2: 1 to 5 • G1: A to D No grade requirement for B3 subject
B4 • B1: 1st best subject • B2: 2nd best subject • B3: 3rd best subject • B4: 4th best subject	No grade requirement

Grade conversion to ITE aggregate points

G3, G2 and G1 grade will be converted to ITE aggregate points to compute the aggregate scores.

G3 Grades	G2 Grades	G1 Grades	ITE Aggregate Points
A1, A2, B3, B4, C5, C6, D7	1,2,3	A	1
E8	4	B	2
9	5	C	3
-	6	D	4
-	-	E	5

Bonus points

The CCA bonus points are subtracted from your gross aggregate scores to obtain the respective net aggregate scores for posting.

You can get a maximum of 2 bonus points from CCA grade.

Type of Bonus Points	Points
CCA Grade	Excellent: 2 Good: 1

Students who offer 4 G1 subjects will join Year 1 of Higher Nitec and may be offered the accelerated pathway if they meet academic requirements during their Year 1 Semester 1 examinations. This pathway will allow them to attain a Higher Nitec in a shorter duration of about two years.

Admission to Arts Institution Diploma

For: Students taking **at least 5 G3 Subjects / 4 G3 Subjects + 1 G2 Subject**

To be eligible for admission into a NAFA or LASALLE Diploma programme:

A pass in English (G3) at Grade C6 or better, and an aggregate score of 21 points or better in 4 other subjects, one of which can be at G2. Students who offer all four subjects at G3 will have the subject with the lowest grade mapped from G3 to G2.

Mapping of G3 grade to G2 grade:

G3 Grade	G2 Grade
A1, A2, B3	1
B4, C5, C6	2
D7	3
E8	4
9	5
-	6

To determine your suitability for the programme, you will need to submit a portfolio, undergo an audition, attend an admission test or interview, depending on the diploma programme you are applying to.

The bonus points are subtracted from your aggregate scores to obtain the net aggregate scores for application.

You can get a maximum of 2 bonus points from CCA grade.

Type of Bonus Points	Points
CCA Grade	Excellent: 2 Good: 1

Admission to NAFA Foundation Programme

For: Students taking **at least 5 G2 Subjects**

To be eligible for admission into the NAFA Foundation Programme:

An aggregate ELMAB3 (English Language, Mathematics, Best 3 other subjects) score of 15 points or better, which is computed with G2 subjects, excluding CCA points.

Grade 3 in English at G2.

If you have taken subjects at G3, they will be mapped from G3 to G2.

Mapping of G3 grade to G2 grade:

G3 Grade	G2 Grade
A1, A2, B3	1
B4, C5, C6	2
D7	3
E8	4
9	5
-	6

In addition to meeting the educational qualification requirements, applicants must submit a portfolio, attend an admission test or audition, depending on their selected course of study. Applicants may be asked to attend an interview.

Successful applicants will be given a conditional offer of admission to the diploma programmes. Upon the successful completion of the NFP, students will be offered a place in their chosen diploma programme.

Eligibility to Secondary 5

You will be eligible for the 5th year if you meet either one of the following criteria:

- **3 or more G3 Passes, and not qualify for JC, MI or polytechnic diploma course**
  Students do not qualify for admission to polytechnic diploma if they fail to meet the minimum entry requirements for any polytechnic diploma courses or if their ELR2B2 net aggregate score is 23 points or higher (after accounting for CCA bonus points).
- **2 or fewer G3 Passes, and attain a gross ELMAB3 ≤ 21, ELB3 ≤ 14 or MAB3 ≤ 14, computed at G2**
  Students will need at least Grade 5 at G2 for all subjects used in aggregate computation.

Only students with a gross ELMAB3 (at least Grade 5 for all subjects computed at G2) of 19 points or better can offer all their subjects at G3 in the 5th year.

Subject Combinations Important Dates

Date	Activity
22 Oct, Thursday 12.30 pm	**Start of Subject Combination Exercise (online)**
27 Oct, Tuesday 5 pm	**Deadline to submit choices (online)**
5 Nov, Thursday 12 pm	**Release of subject allocation (online)** **Start of appeal submissions (hardcopy)**
6 Nov, Friday 5 pm	**Deadline to submit appeal form (hardcopy) to General Office**
12 Nov, Thursday 12pm	**Release of appeal results (online)**

Subject Combinations offered at BMSS

For: Students taking **mainly G3 subjects**

Cat	Subject 1	Subject 2	Subject 3	Subject 4 – Choice of Combined Humanities	Subject 5	Subject 6	Subject 7	Remarks
A	English Lang	Mother Tongue Lang	Mathematics	Social Studies & Geography Or Social Studies & History	Chemistry	Physics Or Biology	Additional Mathematics	
B	English Lang	Mother Tongue Lang	Mathematics	Social Studies & Geography Or Social Studies & History	B1 – Chemistry	B1 – Sci (Phy / Bio)	# Principles of Accounts Or Additional Mathematics	# can offer G3 Computing to replace one Pure Science or replace subject 7 POA if did not qualify for Add Maths
					B2 – Physics	B2 – Sci (Chem / Bio)		
C	English Lang	Mother Tongue Lang	Mathematics	Social Studies & Geography Or Social Studies & History Or Social Studies & English Literature	Sci (Physics / Chemistry)	Design & Technology Or Art	* Additional Mathematics	* offer as subject 7 if students qualify for Add Maths # can offer G3 Computing to replace subject 6
					Sci (Biology / Chemistry)	Nutrition and Food Science Or Principles of Accounts		

Criteria (based on Sec 2 overall results) for taking:

1) 2 Pure Sciences

- Mathematics ≥ 65% AND Science ≥ 70%
- Additional criteria for Biology: English ≥ 55%

2) Additional Mathematics

- Mathematics ≥ 65% AND Algebra component ≥ 65%

3) G3 Computing (offered at designated centres outside school)#

- Overall score of at least 65% in G3 Mathematics at the end of Secondary 1 and at least 60% in G3 Mathematics at the end of Secondary 2.

For: Students taking **mainly G2 subjects**

Group	Subject 1	Subject 2	Subject 3	Subject 4 – Choice of Combined Humanities	Subject 5	Subject 6
1 & 2	English Lang	Mother Tongue Lang	Mathematics	Social Studies & Geography Or Social Studies & History	Science (Phy / Chem) Or Science (Bio / Chem)	Design & Technology Or Nutrition and Food Science Or Principles of Accounts Or Computing

For: Students taking **mainly G1 subjects**

Group	Subject 1	Subject 2	Subject 3	Subject 4	Subject 5	Subject 6
1 & 2 (5 subjects)	English Lang	Mother Tongue Lang	Mathematics	Computing Or Science	Elements of Business Skills Or Design & Technology Or Nutrition and Food Science	Humanities (non-examinable) for all

Subjects Information

For more information on the subjects, refer to SEAB website for the respective examination syllabuses as follows:

Subject Level	URL
G3	https://www.seab.gov.sg/secondary-education-certificate-sec/g3-syllabuses-for-school-candidates-2027/
G2	https://www.seab.gov.sg/secondary-education-certificate-sec/g2-syllabuses-for-school-candidates-2027/
G1	https://www.seab.gov.sg/secondary-education-certificate-sec/g1-syllabuses-for-school-candidates-2027/

G3 Subjects

Subject 4 - Combined Humanities

Subject	**G3 - Humanities (Social Studies, Geography)**
What is the subject about?	Geography emphasises the integrative study of physical and human environments to enable students to gain a better understanding of their own space and other parts of the world. It also focuses on the interconnectedness among groups of people, and between people and their environment. The geography student can expect to acquire a wide range of knowledge and skills to understand and explain physical and human phenomena, and other contemporary environmental and social issues that occur in different places and cultures
Syllabus	***Cluster 1: Geography in Everyday Life*** *Topic 1.1 – Thinking Geographically (4 sub-topics)* *Topic 1.2 – Sustainable Development (4 sub-topics)* *Topic 1.3 – Geographical Methods (4 sub-topics)* ***Cluster 2: Tourism*** *Topic 2.1 – Tourism Activity (4 sub-topics)* *Topic 2.2 – Tourism Development (4 sub-topics)* *Topic 2.3 – Sustainable Tourism Development (4 sub-topics)* **Cluster 4 – Tectonics** *Topic 4.1 – Plate Tectonics (4 sub-topics)* *Topic 4.2 – Earthquakes and Volcanoes (4 sub-topics)* *Topic 4.3 – Disaster Risk Management (4 sub-topics)*
Assessment (How will the subject be tested?)	Social Studies (50%) which is compulsory and an Elective Component (Geography) (50%). For Geography component: • 1hr 45min Pen and Paper exam on the syllabus above • Students will be required to answer one 9-mark essay question, which will be assessed using level descriptors. This question will test their ability to evaluate strategies/evidence and reach well-reasoned conclusions.
Considerations to make before deciding to take the subject.	Ask yourself • Do I enjoy learning about environmental systems and human societies? • Am I comfortable analyzing data, reading maps, and interpreting trends? • Can I connect different concepts, think critically, and apply my learning on sustainable resource management in a real-world context?
Progression opportunities	The subject provides strong foundations for both JC (H1/H2 Geography) and polytechnic courses (Environmental Management, Urban Planning, Tourism). These skills are valuable for careers in environmental science, urban planning, business, tourism, and public policy.

Subject	**G3 - Humanities (Social Studies, <u>History</u>)**
What is the subject about?	History is about an appreciation for past human experiences, critical thinking, and connections between past and present. It equips students with skills to navigate a complex world by analyzing historical forces, events, and perspectives. The curriculum fosters inquiry, source evaluation, and communication of historical knowledge. Students develop critical thinking, discernment, and empathy, enabling them to engage responsibly as global citizens. They learn to assess historical significance, understand change, and respect diverse viewpoints.
Syllabus	<u>Unit 1:</u> • *After World War I* • *Rise of Authoritarian Regime – Case study of Nazi Germany and Militarist Japan* • *War in Europe and the Asia Pacific* <u>Unit 2:</u> • *The Cold War – Case study of the Vietnam War and the Korean War* • *End of the Cold War*
Assessment (How will the subject be tested?)	Social Studies (50%) which is compulsory and an Elective Component (History) (50%). For History component: • *1 hr 50 min (pen and paper)* • *Format of Paper:* *Section A (Source-based Case Study) (30 marks)* *Section B (Essay Questions) (20 marks) – Students are required to answer 2 out of 3 questions.*
Considerations to make before deciding to take the subject.	Ask yourself: • Am I interested in historical events and how they shaped the world today? • Am I willing to read different sources and think critically about them? • Am I interested in exploring different perspectives on historical events? • Do I want to improve my ability to think critically and argue logically? • Do I want to understand why the world is the way it is today?
Progression opportunities	The subject provides strong foundations for both JC (H1/H2 History) and polytechnic courses (Arts Business Management, Common Arts, Design and Media Programme). The skills learnt in history are valuable for careers in law and government, journalism and media, research and heritage management, education and others.

Subject	**G3 - Humanities (Social Studies, English Literature)**
What is the subject about?	The study of Literature empowers students to make meaning of texts and see themselves and the world from diverse perspectives. It inspires students to empathise with others, to find their own voice as they reflect on the human condition with discernment, and to consider the impact of their beliefs and actions on society. Students who complete this course in Literature will be: ・ Empathetic and global thinkers ・ Critical readers ・ Creative meaning-makers ・ Convincing communicators
Syllabus	The Literature syllabus engages students in active meaning-making in relation to prose and poetry. The key topics are: a. **Five Areas of Study** ・ Plot ・ Character ・ Theme ・ Style ・ Setting and Atmosphere b. **Processes: Responding through Dialogue and Writing** Dialogue and writing are instrumental to knowledge construction. As such, they will form the foundation for students to demonstrate their thinking and understanding of the text.
Assessment (How will the subject be tested?)	Social Studies (50%) which is compulsory and an Elective Component (English Literature) (50%). ・ 1 hour 40-minute pen and paper exam on the syllabus above. ・ Students will be required to answer **two questions**: **Section A** (25%) ・ **Prose** – Answer **one** question from a choice of two essay questions and one passage-based question ・ The selected prose text for this section is 'Klara and the Sun', Kazuo Ishiguro **Section B** (25%) ・ **Unseen Poetry** – Answer **one** question from a choice of two unseen* poems ・ For every year of examination, one question will be set on a Singapore text. (**'unseen' refers to poems that have not been taught in class*)
Considerations to make before deciding to take the subject.	Ask yourself ・ Do I enjoy reading, analysing and interpreting both prose and poetry? ・ Am I comfortable uncovering hidden meanings behind words and decoding writer's intentions? ・ Am I able to make connections to the texts I am reading on an individual, societal and global level? ・ Am I comfortable with critical thinking and accepting ambiguity?

	▪ Am I able to organise my ideas and express them clearly and coherently?
Progression opportunities	The subject provides strong foundations for both JC (H1/H2 Literature) and polytechnic courses (Mass Communication, Media Studies, Business Management, Arts Business Management or study of languages). These skills are valuable for careers in journalism, publishing, communications, marketing, public relations, tourism, social media management, human resources and education.

Subject 5 and/or 6 – Sciences

Comparison between G3 - Pure and Combined Sciences

	Pure Science	**Combined Science**

Syllabus	Subject comprise of one science by itself.
	
	• has greater depth in most topics,
	• is more rigorous and
	• has questions require more independent and deep thinking where students are required to
	  ○ interpret unfamiliar context and apply what they have learnt.
	  ○ make sense of the data in order to find how to proceed, connecting knowledge from a few topics, with little scaffolding.
		Two components make up one subject e.g. Science (Chemistry/Biology)
		
		• has lesser depth in most topics
		• is less rigorous and
		• has questions that are more direct and familiar where students
		  ○ start off with a familiar context that they would have learnt in class and
		  ○ required to make sense of the data. However, their line of thought to answer the question is scaffolded through steps and are more direct.

Assessment (How will the subject be tested?)	Paper 1 (40 marks; 1h; 30%) • MCQ Paper 2 (80 marks; 1h 45min; 50%) • Structured and Free-response questions with a compulsory 8 to 12 marks data-based question that requires candidates to interpret, evaluate or solve problems using a stem of information KwU: 45% of marks** HISP: 55% of marks** Paper 3 (40 marks; 1h 50min; 20%) • Contains two to three compulsory practical questions. • One or more of the questions may incorporate planning of an experiment and require candidates to apply and integrate knowledge and understanding from different sections of the syllabus. • May include questions on data-analysis which do not require practical equipment and apparatus.	Paper 1 (40 marks, 1h; 20%) • MCQ from both sciences Paper 2 / 3 / 4* (65 marks; 1h 15min; 32.5%) • Structured and Free-response questions *Paper 2: Science (Physics) *Paper 3: Science (Chemistry) *Paper 4: Science (Biology) KwU: 50% of marks (with 20% recall)** HISP: 50% of marks** Paper 5 (30 marks; 1h 30min; 15%) • Contains one or two compulsory questions on each of the two Sciences. • In one or both questions, students would need to suggest a modification or extension, which does not need to be executed. ***KwU: Knowledge with Understanding* ***HISP: Handling Information and Solving Problems*

	Pure Science	**Combined Science**
Considerations to make before deciding to take the subject.	For pure science(s), ask yourself: • Do I have a very strong mastery of Lower Sec Science? • Am I very interested in Biology / Chemistry / Physics • Am I able to persevere through a more rigorous syllabus (more periods, more work)? • Am I able to apply higher order thinking skills well? • Am I able to handle a lot of data that are of unfamiliar context?	
Progression opportunities	(JC) To do a H2 Science at A-Level, a minimum of a Combined Science with the corresponding Science subject at O-Level is required. (Poly) For courses (Type C and D) relating to Science, Engineering, Design and Information technology etc, either combined science or pure science can be used as one of the relevant subject.	

Subject	**G3 - Pure Biology / Science Biology**
What is the subject about?	Biology focuses on the study of living organisms and their interactions with the environment. It covers essential biological concepts such as cell structure and function, human physiology, genetics, evolution, and ecology. Students explore the diversity of life forms and how they adapt to different environments. The syllabus aims to develop students' scientific inquiry skills, encouraging them to engage in critical thinking and practical investigations to understand the biological world and its relevance to real-life applications.
Syllabus	• Cells and The Chemistry of Life • The Human Body – Maintaining Life • Living Together – Plants, Animals and Ecosystems • Continuity of Life Pure and combined science cover the same broad content structure with pure science having a greater depth of coverage in most topics.
Progression opportunities	Biology offers a foundation for students who are interested in industries pertaining to healthcare, life sciences, pharmaceuticals, biotechnology, environmental conservation, and research. It equips them with the necessary knowledge and skills to pursue careers in fields such as medicine, laboratory research, genetic engineering, public health, and environmental management. This strong biological background is also essential for students aiming to continue their studies in university or polytechnic programs related to biomedical sciences, bioengineering, and health sciences.

Subject	**G3 - Pure Chemistry / Science Chemistry**
What is the subject about?	Chemistry focuses on fundamental principles of chemistry and their applications in everyday life. It covers topics such as atomic structure, the periodic table, chemical bonding, stoichiometry, acids and bases, energy changes in reactions, and organic chemistry. Students will also study the practical aspects of chemistry, including laboratory techniques and the importance of chemical safety. The course emphasises the development of scientific inquiry skills, preparing students for careers in industries such as pharmaceuticals, environmental science, and chemical engineering, as well as further studies in the field of chemistry.
Syllabus	• Matter – Structures and Properties • Chemical Reactions • Chemistry in a Sustainable World Pure and combined science cover the same broad content structure with pure science having a greater depth of coverage in most topics.
Progression opportunities	Chemistry offers a foundation for students who are interested in industries pertaining to pharmaceuticals, environmental science, materials science, energy, and manufacturing. It provides essential knowledge and skills for careers in chemical engineering, drug development, environmental conservation, and product innovation. This strong chemistry background is also crucial for students pursuing higher education in fields such as biochemistry, industrial chemistry, chemical engineering, and environmental science at universities or polytechnics. Most undergraduate courses require Chemistry as a prerequisite. For example, to pursue dentistry or medicine at NUS, Chemistry, along with either Biology or Physics, is a required subject.

Subject	**G3 - Pure Physics / Science Physics**
What is the subject about?	Physics covers fundamental principles of physics and their applications in real-world contexts. It includes topics such as mechanics, thermal physics, waves, electricity and magnetism, light, and atomic physics. Students will develop an understanding of the physical world, learn how to solve practical problems, and understand the importance of physics in technology and everyday life. The course emphasises scientific inquiry, critical thinking, and practical skills, providing a strong foundation for students pursuing further education or careers in engineering, technology, and physical sciences.
Syllabus	• Measurement • Newtonian mechanics • Thermal physics • Waves • Electricity & magnetism • Radioactivity Pure and combined science cover the same broad content structure with pure science having a greater depth of coverage in most topics.
Progression opportunities	Physics offers a foundation for students who are interested in industries pertaining to engineering, technology, telecommunications, aerospace, energy, and electronics. It provides essential knowledge and skills for careers in fields such as mechanical engineering, electrical engineering, renewable energy, robotics, and computer science. This solid foundation in physics is also important for students who wish to pursue higher education in fields such as applied physics, engineering, data science, and nanotechnology at universities or polytechnics.

Subject 6 and/or 7 – Electives

<table>
<tr><td>Subject</td><td colspan="2">G3 - Additional Mathematics</td></tr>
<tr><td>What is the subject about?</td><td colspan="2">Conceptual understanding, skill proficiency, reasoning, communication and connections, thinking skills and heuristics, and applications and modelling to the 3 strands stated below.</td></tr>
<tr><td>Syllabus</td><td colspan="2">3 main strands –
• Algebra
• Geometry & Trigonometry
• Calculus</td></tr>
<tr><td>Assessment (How will the subject be tested?)</td><td colspan="2">▪ Paper 1: 2h 15 mins, 90 marks, ~12 Qs
▪ Paper 2: 2 h 15 mins, 90 marks, ~10 Qs

Questions are lesser but more challenging which require a lot of working to be done. Below is just one example ONLY!</td></tr>
<tr><td></td><td>Write as a single fraction in its simplest form
$\frac{3x}{(2x-1)^2}-\frac{2}{2x-1}$.

Solution
$\frac{3x}{(2x-1)^2}-\frac{2}{2x-1}$
$=\frac{3x}{(2x-1)^2}-\frac{2(2x-1)}{(2x-1)^2}$
$=\frac{3x-4x+2}{(2x-1)^2}$
$=\frac{2-x}{(2x-1)^2}$</td><td>Express $\frac{15-6x}{(2x-1)(x^2+2)}$ in partial fractions.

Solution
Let $\frac{15-6x}{(2x-1)(x^2+2)}=\frac{A}{2x-1}+\frac{Bx+C}{x^2+2}$.
$15-6x=A(x^2+2)+(Bx+C)(2x-1)$
Let $x=\frac{1}{2}$: $15-6\left(\frac{1}{2}\right)=A\left(\left(\frac{1}{2}\right)^2+2\right)+0$
$A=\frac{16}{3}$
Let $x=0$: $15=A(2)+C(-1)$
$C=-\frac{13}{3}$
Equating coefficients of x^2: $0=A+2B$
$B=-\frac{8}{3}$
Thus $\frac{15-6x}{(2x-1)(x^2+2)}=\frac{\frac{16}{3}}{2x-1}+\frac{-\frac{8}{3}x-\frac{13}{3}}{x^2+2}$
$=\frac{16}{3(2x-1)}-\frac{8x+13}{3(x^2+2)}$</td></tr>
<tr><td>Considerations to make before deciding to take the subject.</td><td colspan="2">Ask yourself if…
• Willing to put in time and effort to do Add Maths?
• Are coping well with Maths so far?
• Have the aptitude (ability) and interest in learning more abstract and challenging concepts?</td></tr>
<tr><td>Progression opportunities</td><td colspan="2">Junior College (JC): For H2 Mathematics, Add Maths is highly recommended because H2 Mathematics builds on Add Maths concepts.

Polytechnic (Poly): Some engineering, IT, and science-related courses may require or strongly prefer Add Maths.
Business, humanities, and design courses usually do not require Add Maths.</td></tr>
</table>

Subject	**G3 - Principles of Accounts**
What is the subject about?	Students will learn accounting knowledge, skills and values. The subject aims to develop in students the knowledge to prepare, communicate and use accounting and non-accounting information to make decisions. Throughout the subject, students will engage in a combination of calculations, preparation of various financial statements, and application of key concepts to real-world scenarios.
Syllabus	**Key topics will include** <u>Accounting and its role in stakeholders' decision-making process</u> - Roles of accounting and accountants - Stakeholders and their decision-making needs. <u>Analysis of financial statements for decision-making</u> - Profitability - Liquidity - Efficiency <u>Businesses</u> - Types of businesses - Forms of business ownership <u>Measurement and presentation of business activities</u> - Elements of financial statements - Accounting equation - Statement of financial performance - Statement of financial position - Revenue and other income - Cost of sales and other expenses <u>Assets</u> - Cash in hand and cash at bank - Inventories - Trade receivables - Non-current assets, Depreciation, Sale of Non-current assets <u>Liabilities</u> - Trade payables - Long-term borrowings <u>Equities</u> - Capital and share capital - Drawings - Transfer of profit / loss for the year and retained earnings <u>Accounting Assumptions and Principles</u> - Accounting theories <u>Accounting information system and accounting cycle</u> - Understanding accounting information system and accounting cycle - Understanding double-entry recording system

	- Internal controls
Assessment (How will the subject be tested?)	Paper 1 : 1 hour (40 marks) Students will be required to answer 3 to 4 compulsory structured questions. Paper 2 : 2 hours (60 marks) Students will be required to answer 4 compulsory structured questions. - One question requires the preparation of financial statements for a business for one financial year. - A scenario-based question (7 marks) will be part of one of the 3 remaining questions. (20 marks)
Considerations to make before deciding to take the subject.	Ask yourself • Am I meticulous and detail-oriented, understanding that small mistakes can have significant cumulative consequences in your work? • Is my written work consistently neat, well-organised, and structured? • Can I communicate my ideas and decisions clearly by comparing and analyzing evidence? • Am I comfortable working with numbers and remembering the formats of financial statements? • Can I express my ideas clearly and effectively in written reports?
Progression opportunities	The subject provides a good foundation for students keen to pursue an accounting or a business-related course.

Subject	**G3 - Design & Technology**
What is the subject about?	• Engage students in **designing and prototyping ideas** • Emphasises on understanding everyday activities and creating possibilities to make life better. • Through the design process, students cultivate **creative, critical and reflective thinking** to make sense of their learning and to develop related dispositions and skills using graphical means and technology
Syllabus	The content to be covered are organised into two sections: (i) Design and (ii) Technology. The syllabus aims to allow students to: • develop design-related dispositions • acquire design techniques and strategies • consolidate a sound working knowledge of technology (materials, workshop processes, structures, mechanisms and electronics)
Assessment (How will the subject be tested?)	**Paper 1 (40%, 2h)** **Written Paper (80 marks)** Q1 (26 marks): Design Q2-4 (54 marks): Application **Paper 2 (60%, 22 weeks)** **Coursework** Involves design journal (real-time document that reflects the candidate's attempt at managing his or her personal design process which includes mock-up(s) and a prototype) and presentation boards.

Considerations to make before deciding to take the subject.	Ask yourself…
	• Am I a creative person? Do I like designing?
	• Can I sketch and draw 3-Dimensional Objects?
	• Do I like process based and skill-based curriculum?
	  • Process skills in gathering relevant information, analyzing it and applying it effective in design solution
	  • Practical skills in drawing and designing?
	  • Practical skills in testing and making of design?
	  • Am I an effective person in learning and usage of ICT tools/skills for coursework applications.
	• Do I like project work?
	  • Project management. An organised person who is able to meet timeline?

Progression opportunities	Benefits for progressions to Polytechnics: Coursework exposure equips students to handle the modular structure of ITE and Polytechnic courses, resembling coursework in each module. Related Polytechnic Courses: • Engineering, IT, Built Environment & Applied & Health Science • Humanities, Media & Design

Subject	**G3 - Nutrition and Food Science**
What is the subject about?	• Lead a **healthier lifestyle** proactively through **proper diet and nutrition.** • Advocate **sustainable food consumption** by planning and making appropriate food choices. • Apply principles of **culinary science creatively in food preparation and cooking**.
Syllabus	• **Nutrition and Health** – Nutrients / Diet and Health • **Food Literacy and Consumer Literacy** - Food Management / Smart Consumer • **Food Science** - Food Safety / The Science in Food Preparation / Reactions in Food During Preparation / Cooking Sensory Evaluation of Food
Assessment (How will the subject be tested?)	**Paper 1 (40%, 2h) - Written Paper (100m)** Section A: 15 marks (multiple choice questions) Section B: 55 marks (short-answer-type questions and data-response-type questions) Section C: 30 marks (open-ended questions) **Paper 2 (60%, max. 28hrs) - Coursework (80m)** Involves research, decision making, investigation, planning, execution and evaluation (to present in coursework folio, max. 25 pages)
Considerations to make before deciding to take the subject.	Ask yourself… • Do I have a passion for culinary skills & nutrition & food science? • Do I like process based and skills-based curriculum? • Process skills in research development, analysis and decision making to develop ideas towards a solution for the food task? • Planning and execution of designed solution of food task using appropriate cooking techniques and methods? • Am I an effective person in the learning and usage of Microsoft Word & to type content within time limit? e.g. Coursework report writing is approximately 23 pages. • Am I an analytical person and able to use data effectively to design the food task? • Am I an organised person who is able to meet timeline? • Am I ready to cook 3-4 dishes within 2 hrs, including wash up & plating?
Progression opportunities	Benefits for progressions to ITE & Polytechnics: Coursework exposure equips students to handle the modular structure of ITE and Polytechnic courses, resembling coursework in each module. Related Polytechnic Courses: • Food Science and Technology, Food Science and Nutrition, Food, Nutrition and Culinary Science, Applied & Health Science

<table>
<tr><td>Subject</td><td>G3 - Art (Click here or scan QR to view a sharing on the subject)</td></tr>
<tr><td>What is the subject about?</td><td>• Art expands imagination, enhances creativity and develops adaptability
• Art builds students' capacity to critically discern and process visual information, and communicate effectively
• Art fosters students' sense of identity, culture, and place in society</td></tr>
<tr><td>Syllabus</td><td>The Syllabus covers 4 Learning Content and 3 Core Learning Experience
<table><tr><th>4 Learning Content</th><th>3 Core Learning Experiences</th></tr><tr><td>- Art Forms and Media
- Visual Qualities & Visual Strategies
- Artistic Processes
- Context</td><td>- Building Portfolios
- Art journalling
- Art Conversations</td></tr></table></td></tr>
<tr><td>Assessment (How will the subject be tested?)</td><td><u>Paper 1 Written Paper: Visual Response 2hr 15 mins (50%)</u>
• Section A: Visual Analysis (10marks) - One question with two sub-parts for visual analysis and discussion. The question is accompanied by one unseen visual stimulus.
• Section B: Exploratory Sketching - One practical task in response to a visual stimulus. Candidates will provide sketches with annotations, culminating in a sketch that shows their concept for the visual response.
<u>Paper 2 Portfolio (30hrs within 12 weeks) (50%)</u>
• Part A: Selection of Visual Materials
Maximum of 15 screens illustrating artistic exploration and processes which include at least 3 art forms and media.
Part B : Commentary
An articulation of personal artistic growth based on 3 works, in not more than 800 words, and under 10 A4-sized pages.</td></tr>
<tr><td>Considerations to make before deciding to take the subject.</td><td>Ask yourself if…
• you enjoy art and wish to learn how to use it to communicate your ideas visually.
• you are willing to invest time of at least 3 hours a week outside of lesson time to create and journal on a weekly basis?
• you are willing to have an open mind to experiment, persevere and explore various mediums / media tools?
• you have the capacity and discipline to start building a portfolio over 2 years.</td></tr>
<tr><td>Progression opportunities</td><td>The Portfolio created over 2 years will be an invaluable asset when students apply for polytechnic Early Admission Exercise (EAE).

G3 Art will help students to gain foundational knowledge in the Visual Arts which will be asset when they enter visual and media art related courses in polytechnics and art institutes like NAFA / Lassalle.

Related Polytechnic courses:
- Diploma in Visual Communication
- Diploma in Media Production and Design
- Diploma in Interior Design</td></tr>
</table>

Subject	**G3 - Computing**
What is the subject about?	G3 Computing is an upper secondary subject that provides students with the foundation to pursue further studies in computing and equips them with skills to participate in a rapidly changing technological environment. Students will learn how to apply computational thinking, including abstraction and decomposition, to solve real-world problems. They will design, write, test, and debug programs, while gaining an understanding of how computer systems, data, and networks function. The subject also develops awareness of the social, ethical, and legal implications of computing, and nurtures important 21st century competencies such as problem-solving, collaboration, and logical reasoning
Syllabus	The G3 Computing syllabus consists of 5 key modules: <u>1. Computing Fundamentals</u> Computer architecture, data representation, logic gates and Boolean logic. <u>2. Algorithms and Programming</u> Problem analysis and solution design, programming using Python Control structures, functions, data structures, testing and debugging. <u>3. Spreadsheets</u> Formulas and functions, data analysis and modelling, use of logical, statistical, and lookup functions. <u>4. Networking</u> Computer networks, internet concepts and communication, security and privacy. <u>5. Impact of Computing</u> Technology in society, intellectual property and copyright, communication and misinformation and emerging technologies. These modules develop both theoretical understanding and practical application skills.
Assessment (How will the subject be tested?)	Students will sit for 2 papers. Paper 1 (2 hours, 60%) – Written paper comprising of multiple-choice and structured questions that tests knowledge, understanding, and application across all modules. Paper 2 (2 hours 30 minutes, 40%) – Practical based assessment comprising of hands-on tasks used to assess students' skills in programming and data handling skills.
Considerations to make before deciding to take the subject.	Ask yourself if… • you enjoy logical thinking and problem-solving • you have an interest in technology, coding, or AI • you are comfortable with Mathematics concepts

	• you are willing to learn programming (no prior experience required) • you can manage your time and academic workload Important commitment: • Lessons are conducted at an external centre • You will need to travel to the centre after your school lessons • Lessons are approximately 3 hours per week, over 1–2 afternoons • The subject runs over 2 years (Sec 3–4) • Some lessons may be conducted in a blended format (face-to-face + online) • You must be able to balance this with your CCA and other commitments This is an external subject, and strong commitment is required.

Progression opportunities	Students with G3 computing will be well-prepared for a variety of courses post-secondary:
	• Junior College
	• Polytechnic courses such as:
	  ○ Information Technology
	  ○ Cybersecurity
	  ○ Data Science / Business Analytics
	  ○ Computer Engineering
	  ○ Game Development / Interactive Media
	• ITE courses in ICT-related fields
	
	Students will also be able to build a portfolio of computing projects for EAE, scholarships, and further studies.
	
	Students will also develop critical 21st-Century Skills such as
	1) Computational Thinking
	2) Problem-Solving
	3) Logical Reasoning
	4) Programming Skills
	5) Digital Literacy & Responsibility

G2 Subjects

Subject 4 - Combined Humanities

Subject	**G2 – Combined Humanities (Social Studies, Geography)**
What is the subject about?	Geography emphasises the integrative study of physical and human environments to enable students to gain a better understanding of their own space and other parts of the world. It also focuses on the interconnectedness among groups of people, and between people and their environment. The geography student can expect to acquire a wide range of knowledge and skills to understand and explain physical and human phenomena, and other contemporary environmental and social issues that occur in different places and cultures
Syllabus	***Cluster 1: Geography in Everyday Life*** *Topic 1.1 – Thinking Geographically (4 sub-topics)* *Topic 1.2 – Sustainable Development (4 sub-topics)* *Topic 1.3 – Geographical Methods (4 sub-topics)* **Cluster 4 – Tectonics** *Topic 4.1 – Plate Tectonics (4 sub-topics)* *Topic 4.2 – Earthquakes and Volcanoes (4 sub-topics)* *Topic 4.3 – Disaster Risk Management (4 sub-topics)*
Assessment (How will the subject be tested?)	**Social Studies (50%)** which is compulsory **and an Elective Component (Geography) (50%).** • 1hr 45min Pen and Paper exam on the syllabus above • Students will be required to answer one 6-mark essay question, which will be assessed using level descriptors. This question will test their ability to evaluate strategies/evidence and reach well-reasoned conclusions.
Considerations to make before deciding to take the subject.	Ask yourself • Do I enjoy learning about environmental systems and human societies? • Am I comfortable analyzing data, reading maps, and interpreting trends? • Can I connect different concepts, think critically, and apply my learning on sustainable resource management in a real-world context?
Progression opportunities	The subject provides strong foundations for both JC (H1/H2 Geography) and polytechnic courses (Environmental Management, Urban Planning, Tourism). These skills are valuable for careers in environmental science, urban planning, business, tourism, and public policy.

Subject	**G2 – Combined Humanities (Social Studies, History)**
What is the subject about?	History is about an appreciation for past human experiences, critical thinking, and connections between past and present. It equips students with skills to navigate a complex world by analyzing historical forces, events, and perspectives. The curriculum fosters inquiry, source evaluation, and communication of historical knowledge. Students develop critical thinking, discernment, and empathy, enabling them to engage responsibly as global citizens. They learn to assess historical significance, understand change, and respect diverse viewpoints.
Syllabus	Unit 1: ▪ *After World War I* ▪ *Rise of Authoritarian Regime – Case study of Nazi Germany* ▪ *War in Europe and the Asia Pacific* Unit 2: ▪ *The Cold War - Case study of the Vietnam War* ▪ *End of the Cold War*
Assessment (How will the subject be tested?)	**Social Studies (50%)** which is compulsory **and an Elective Component (History) (50%).** • *1 hr 50 min (pen and paper)* • *Format of Paper:* ○ *Section A (Source-based Case Study)(30m)* ○ *Section B (Essay Questions)(20m) – Students are required to answer 2 out of 3 questions.*
Considerations to make before deciding to take the subject.	Ask yourself: • Am I interested in historical events and how they shaped the world today? • Am I willing to read different sources and think critically about them? • Am I interested in exploring different perspectives on historical events? • Do I want to improve my ability to think critically and argue logically? • Do I want to understand why the world is the way it is today?
Progression opportunities	The subject provides strong foundations for both JC (H1/H2 History) and polytechnic courses (Arts Business Management, Common Arts, Design and Media Programme). The skills learnt in history are valuable for careers in law and government, journalism and media, research and heritage management, education and others.

Subject 5 - Combined Science

Subject	**G2 – Combined Science (Chemistry, Biology)**
What is the subject about?	Biology focuses on understanding living organisms and their interactions with the environment. It covers topics such as cell structure and function, human physiology, reproduction, genetics, and ecology. Students will explore the diversity of life forms, their adaptations, and the principles governing life processes. The syllabus also emphasises practical work, encouraging students to develop scientific inquiry skills through experiments and investigations. This foundation prepares students for careers in healthcare, biotechnology, environmental science, and further studies in biological sciences.
Syllabus	• Cells and the Chemistry of Life • The Human Body – Maintaining Life • Living Together – Plants and Animals
Assessment (How will the subject be tested?)	**Chemistry (50%)** which is compulsory **and an Elective Component (Biology) (50%).** Paper 5 & 6 comprises of: (50 marks, 1h 15 min) • 20 marks of MCQ Questions (20 questions) • 22 marks of compulsory structured questions • 8 marks of structured question where candidate must answer only one of the two questions.
Considerations to make before deciding to take the subject.	Ask yourself if: • Am I interested in how living organisms work? • Do I find topics like human health and the environment interesting? • Am I good with learning, processing and using a large body of biological facts? • What area of industry do I want to work in the future?
Progression opportunities	Biology offers a foundation for students who are interested in industries pertaining to healthcare, life sciences, pharmaceuticals, biotechnology, environmental conservation, and research. It equips them with the necessary knowledge and skills to pursue careers in fields such as medicine, laboratory research, genetic engineering, public health, and environmental management. This strong biological background is also essential for students aiming to continue their studies in university or polytechnic programs related to biomedical sciences, bioengineering, and health sciences.

Subject	**G2 – Combined Science (Chemistry, Physics)**
What is the subject about?	Physics introduces students to fundamental principles of physics and their practical applications. Key topics include mechanics, heat, waves, electricity and magnetism, light, and energy. Students will explore how physical laws govern the behaviour of the physical world and learn to apply these principles in real-life situations. The syllabus emphasises both theoretical understanding and experimental skills, with a focus on critical thinking, problem-solving, and the scientific method. It provides a solid foundation for those interested in pursuing further studies or careers in fields such as engineering, technology, and environmental science.
Syllabus	• Measurement • Newtonian Mechanics • Thermal Physics • Waves • Electricity and Magnetism • Radioactivity
Assessment (How will the subject be tested?)	**Chemistry (50%)** which is compulsory **and an Elective Component (Physics) (50%).** Paper 1 & 2 comprises of: (50 marks, 1h 15 min) • 20 marks of MCQ Questions (20 questions) • 22 marks of compulsory structured questions • 8 marks of structured question where candidate must answer only one of the two questions.
Considerations to make before deciding to take the subject.	Ask yourself if: • Do I enjoy solving problems and understanding concepts like motion and energy? • Am I comfortable with math and calculations? • Do I find topics like forces, electricity, and light interesting? • Am I curious about how things like machines and technology function? • What area of industry do I want to work in the future?
Progression opportunities	Physics offers a foundation for students who are interested in industries pertaining to engineering, technology, telecommunications, aerospace, energy, and electronics. It provides essential knowledge and skills for careers in fields such as mechanical engineering, electrical engineering, renewable energy, robotics, and computer science. This solid foundation in physics is also important for students who wish to pursue higher education in fields such as applied physics, engineering, data science, and nanotechnology at universities or polytechnics.

Subject 6 - Electives

Subject	**G2 - Principles of Accounts**
What is the subject about?	It aims to develop in students the knowledge to prepare, communicate and use accounting and non-accounting information to make decisions. Throughout the subject, students will engage in a combination of calculations, preparation of various financial statements, and application of key concepts to real-world scenarios.
Syllabus	**Key topics will include** <u>Accounting and its role in stakeholders' decision-making process</u> - Roles of accounting and accountants - Stakeholders and their decision-making needs <u>Businesses</u> - Types of businesses <u>Measurement and presentation of business activities</u> - Elements of financial statements - Accounting equation - Statement of financial performance - Statement of financial position - Revenue and other income - Cost of sales and other expenses <u>Assets</u> - Cash in hand and cash at bank - Inventories - Trade receivables - Non-current assets and its Depreciation <u>Liabilities</u> - Trade payables - Long-term borrowings <u>Equities</u> - Capital - Drawings - Transfer of profit / loss for the year <u>Accounting Assumptions and Principles</u> - Accounting theories <u>Accounting information system and accounting cycle</u> - Understanding accounting information system and accounting cycle - Understanding double-entry recording system - Internal controls
Assessment (How will the subject be tested?)	Paper 1 : 1 hr (40 marks) Students will be required to answer 3 to 4 compulsory structured questions. Paper 2 : 2 hrs (60 marks) Students will be required to answer 4 compulsory structured questions.

	One question requires the preparation of financial statements for a business for one financial year. A scenario-based question (5 marks) will be part of one of the 3 remaining questions. (20 marks)
Considerations to make before deciding to take the subject.	Ask yourself • Am I meticulous and detail-oriented, understanding that small mistakes can have significant cumulative consequences in your work? • Is my written work consistently neat, well-organised, and structured? • Can I communicate my ideas and decisions clearly by comparing and analyzing evidence? • Am I comfortable working with numbers and remembering the formats of financial statements? • Can I express my ideas clearly and effectively in written reports?
Progression opportunities	The subject provides a good foundation for students keen to pursue an accounting or a business-related course.

Subject	**G2 - Design & Technology**
What is the subject about?	• Engage students in **designing and prototyping ideas** • Emphasises on understanding everyday activities and creating possibilities to make life better. • Through the design process, students cultivate **creative, critical and reflective thinking** to make sense of their learning and to develop related dispositions and skills using graphical means and technology
Syllabus	The content to be covered are organised into two sections: (i) Design and (ii) Technology. The syllabus aims to allow students to: • develop design-related dispositions • acquire design techniques and strategies • consolidate a sound working knowledge of technology (materials, workshop processes, mechanisms and electronics)
Assessment (How will the subject be tested?)	**Paper 1 (40%, 1h)** **Written Paper (60 marks)** Q1 (24m): Design Q2-4 (36m): Application **Paper 2 (60%, 20 weeks)** **Coursework** Involves design journal (real-time document that reflects the candidate's attempt at managing his or her personal design process which includes mock-up(s) and a prototype) and presentation boards
Considerations to make before deciding to take the subject.	Ask yourself… • Am I a creative person? Do I like designing? • Can I sketch and draw 3-Dimensional Objects? • Do I like process based and skills based curriculum? • Process skills in gathering relevant information, analyzing it and applying it effective in design solution • Practical skills in drawing and designing? • Practical skills in testing and making of design? • Am I an effective person in learning and usage of ICT tools/skills for coursework applications. • Do I like project work? • Project management. An organised person who is able to meet timeline?
Progression opportunities	Benefits for progressions to ITE & Polytechnics: Coursework exposure equips students to handle the modular structure of ITE and Polytechnic courses, resembling coursework in each module. Related Polytechnic Courses: • Engineering, IT, Built Environment & Applied & Health Science • Humanities, Media & Design

Subject	**G2 / Nutrition and Food Science**
What is the subject about?	• Lead a **healthier lifestyle** proactively through **proper diet and nutrition.** • Advocate **sustainable food consumption** by planning and making appropriate food choices. • Apply principles of **culinary science creatively in food preparation and cooking**.
Syllabus **Key Topics to be covered** **(What is the main content covered in the subject)**	• ***Nutrition and Health*** *– Nutrients / Diet and Health* • ***Food Literacy and Consumer Literacy*** *- Food Management / Smart Consumer* • ***Food Science*** *- Food Safety / The Science in Food Preparation / Reactions in Food During Preparation / Cooking Sensory Evaluation of Food*
Assessment (How will the subject be tested?)	***Paper 1 (40%, 1.5h) - Written Paper (80m)*** *Section A: 16 marks (multiple choice questions)* *Section B: 40 marks (short-answer-type questions and data-response-type questions)* *Section C: 24 marks (open-ended questions)* ***Paper 2 (60%, max. 25hrs) - Coursework (60m)*** *Involves research, decision making, exploratory study, planning, execution and evaluation (to present in coursework folio, max. 20 pages)*
Considerations to make before deciding to take the subject.	**Self-Reflection Questions** • Do I have a strong interest in **culinary skills, nutrition, and food science**? • Am I comfortable with a **process-based and skills-based curriculum**? • Am I able to apply **process skills** such as research, analysis, and decision-making to develop solutions for food-related tasks? • Can I effectively **plan and execute food tasks**, using appropriate cooking techniques and methods? • Am I proficient in using **Microsoft Word** and able to complete **written coursework within a given time frame** (e.g. an N-Level coursework report of approximately 20 pages)? • Am I able to **analyse and interpret data** to support the design and development of food tasks? • Am I an **organised individual** who can meet deadlines and manage time effectively? • Am I prepared to **plan, prepare and present 3–4 dishes within a 2-hour timeframe**, including cleaning and plating?

Progression opportunities	*Benefits for progressions to ITE & Polytechnics:* *Coursework exposure equips students to handle the modular structure of ITE and Polytechnic courses, resembling coursework in each module.* *Related Polytechnic Courses:* • *Food Science and Technology, Food Science and Nutrition, Food, Nutrition and Culinary Science, Applied & Health Science* *Related ITE Courses:* • Higher Nitec in Nutrition & Dietetics (ITE College East) • Higher Nitec in Food Science & Technology (ITE College East) • Higher Nitec in Culinary Arts (ITE College West) • Nitec in Asian Culinary Arts (ITE College West) • Nitec in Western Culinary Arts (ITE College West)

Subject	**G2 - Computing** (Click here or scan QR to view a sharing on the subject)
What is the subject about?	Computing provides upstream support for embracing digital transformation to survive and strive by providing students with opportunities to acquire useful digital competencies and explore the field of Computing. The curriculum is designed to develop students' computational thinking skills – such as abstraction, decomposition, generalization, and algorithmic thinking – and to promote responsible and ethical use of technology.
Syllabus	Computing Fundamentals – Understanding a computer system Networking – Learning about network concepts Impact of Computing – Exploring emerging technologies, cybersecurity risks and responsible use of computers. Data and Analysis – Developing skills in spreadsheet data organization, processing and analysis using charts. Programming – Engage in visual programming, algorithm development, and game creation. Document Processing and Media Software – Word document processing, designing graphics and producing multimedia presentations and videos.
Assessment (How will the subject be tested?)	Students will sit for 2 papers. Paper 1 – Timed written paper comprising of multiple-choice and short-structured questions. (e-Examination for National Examinations) Paper 2 – Practical based assessment comprising of hands-on tasks used to assess students' skills learnt in different modules.
Considerations to make before deciding to take the subject.	Ask yourself if… • you have interest in technology and digital tools • you enjoy Math and/or Science • you enjoy solving puzzles, logical problems, or coding games like Scratch. • you have a willingness to learn independently • you are thinking about future studies or jobs in IT, engineering, media or science.
Progression opportunities	Students with G2 computing will be well-prepared for a variety of Diploma courses at the polytechnics such as: 1. Information Technology / Computer Engineering 2. Game Development / Interactive Media / Animation 3. Data Science / Business Analytics 4. Cybersecurity Students can also showcase coding projects, digital media or microcontroller creations in Polytechnic Early Admissions Exercise (EAE), Scholarships and internships. Students will also develop critical 21st-Century Skills such as 6) Problem-Solving 7) Creativity 8) Digital Literacy 9) Responsible technology use

G1 Subjects

Subject 4 / 5 – Electives

Subject	**G1 - Science**
What is the subject about?	Science focuses on helping students understand the natural world through everyday contexts, such as "Machines Around Us," "Food Matters," and "Our Body and Health." The course emphasises hands-on learning and practical applications, allowing students to explore scientific phenomena and their impact on society. Key aims include fostering critical thinking, problem-solving, and communication skills while also encouraging safe and ethical practices in scientific inquiry. The syllabus integrates knowledge with real-world situations, preparing students for both further studies and responsible citizenship.
Syllabus	• Machines around us (Energy, electricity, wave, effects of force) • Food matters (Sources of food, food chemistry, food safety) • Our body and health (Staying healthy, digestion, breathing and blood circulation)
Assessment (How will the subject be tested?)	Paper 1 (e-Examination) • 1 h 15 min; 50 marks; 50% • Multiple choice, selected response, short-answer and structured Paper 2 • 1 h; 50 marks; 50% • Short-answer and structured
Considerations to make before deciding to take the subject.	Ask yourself • Do you love science? • Do you love doing experiment in the laboratory? • Would you want to learn how things work? • Would you want develop a strong foundation for science-related ITE courses e.g. engineering, nursing?
Progression opportunities	Science can be used to replace Mathematics as the relevant subjects for some ITE Courses such as engineering, electronics and infor-communications technology and applied and health sciences.

Subject	**G1 - Computing** (Click here or scan QR to view a sharing on the subject)
What is the subject about?	G1 Computing introduces students to essential digital skills and basic computing concepts that are useful for everyday life, further studies, and future work. Students will learn how computers function, how technology impacts society, and how to use digital tools effectively and responsibly. The subject also introduces simple programming and problem-solving. This subject focuses on building foundational digital literacy and confidence in using technology.
Syllabus	Computing Fundamentals - Understanding computer components, input/output devices, and software Networking - Basic concepts of networks and cloud computing Impact of Computing - Understanding technology in daily life and responsible use of computers Document Processing - Creating and formatting documents (text, layout, graphics) Spreadsheets - Basic data organisation, formatting, and charts Media Software - Creating digital media such as graphics, presentations, and videos Programming - Introduction to basic programming concepts and simple game creation
Assessment (How will the subject be tested?)	Students will sit for 2 papers. Paper 1 – Timed written paper comprising of multiple-choice and short-structured questions. (e-Examination for National Examinations) Paper 2 – Practical based assessment comprising of hands-on tasks used to assess students' skills learnt in different modules.
Considerations to make before deciding to take the subject.	Ask yourself if… • you have interest in technology and digital tools • you enjoy Math and/or Science • you enjoy solving puzzles, logical problems, or coding games like Scratch. • you prefer hands-on and practical learning • you have a willingness to learn independently • you are thinking about future studies or jobs in IT, engineering, media or science.
Progression opportunities	Students with G1 computing will be well-prepared for a variety of courses at the polytechnics/ITEs such as: 1. Information Technology / Computer Engineering 2. Game Development / Interactive Media / Animation 3. Data Science / Business Analytics 4. Cybersecurity Students can also showcase coding projects, digital media or microcontroller creations in Early Admissions Exercise (EAE), Scholarships and internships. Students will also develop critical 21st-Century Skills such as 1) Problem-Solving 2) Creativity 3) Digital Literacy 4) Responsible technology use

Subject	**G1 - Elements of Business Skills (EBS)**
What is the subject about?	• An introduction to business concepts by understanding business activities, focusing on basic marketing and customer relations, in Singapore's context. • Students will have opportunities to acquire foundational business knowledge and develop transferable employability skills in the service industry, namely the Travel and Tourism, Hospitality and Retail industries. • Subject will provide students with a basic understanding of business concepts and an awareness of the industry for further studies in institutes of higher learning and careers.
Syllabus	• Businesses and business activities in the 3 service industries namely the Travel and Tourism, Hospitality and Retail industries. • Basic understanding, knowledge and skills in the following areas o Businesses in the service industry of Singapore. o Marketing (4Ps) o Customer service o Communications
Assessment (How will the subject be tested?)	• 1hr 30min Pen and Paper test on theoretical understanding of basic business, marketing and customer service concepts • Undertake 20hrs of coursework during curriculum time to do project work on selected business.
Considerations to make before deciding to take the subject.	Ask yourself • Am I interested in learning how businesses operate in service industries? • Do I have the English competency to conduct research and write reports in the coursework component of the subject in Sec 4?
Progression opportunities	Provides foundational knowledge in ITE subjects like • Hospitality • Tourism Studies • Retail and business studies.

Subject	**G1 - Design & Technology**
What is the subject about?	• Engage students in **designing and prototyping ideas** • Emphasises on understanding everyday activities and creating possibilities to make life better. • Through the design process, students cultivate **creative, critical and reflective thinking** to make sense of their learning and to develop related dispositions and skills using graphical means and technology
Syllabus	The content to be covered are organised into two sections: (i) Design and (ii) Technology. The syllabus aims to allow students to: • develop design-related dispositions • acquire design techniques and strategies • consolidate a sound working knowledge of technology (materials, workshop processes, mechanisms and electronics)
Assessment (How will the subject be tested?)	**Paper 1 (30%, 1h)** **Written Paper (50 marks)** Q1-3 (18 marks): Design Q4-5 (32 marks): Application **Paper 2 (70%, 20 weeks)** **Coursework** Involves design journal (real-time document that reflects the candidate's attempt at managing his or her personal design process which includes mock-up(s) and a prototype) and presentation boards

Considerations to make before deciding to take the subject.	Ask yourself…
	• Am I a creative person? Do I like designing?
	• Can I sketch and draw 3-Dimensional Objects?
	• Do I like process based and skills based curriculum?
	  • Process skills in gathering relevant information, analyzing it and applying it effective in design solution
	  • Practical skills in drawing and designing?
	  • Practical skills in testing and making of design?
	  • Am I an effective person in learning and usage of ICT tools/skills for coursework applications.
	• Do I like project work?
	  • Project management. An organised person who is able to meet timeline?

Progression opportunities	Benefits for progressions to ITE & Polytechnics: Coursework exposure equips students to handle the modular structure of ITE and Polytechnic courses, resembling coursework in each module. Related Polytechnic Courses: • Engineering, IT, Built Environment & Applied & Health Science • Humanities, Media & Design

Subject	**G1 - Nutrition and Food Science**
What is the subject about?	• Lead a **healthier lifestyle** proactively through **proper diet and nutrition.** • Advocate **sustainable food consumption** by planning and making appropriate food choices. • Apply principles of **culinary science creatively in food preparation and cooking**.
Syllabus	• **Nutrition and Health** – Nutrients / Diet and Health • **Food Literacy and Consumer Literacy** - Food Management / Smart Consumer • **Food Science** - Food Safety / The Science in Food Preparation / Reactions in Food During Preparation / Cooking Sensory Evaluation of Food
Assessment (How will the subject be tested?)	**Paper 1 (40%, 1h 30min) - Written Paper (80m)** Section A: 16 marks (multiple choice questions) Section B: 32 marks (short-answer-type questions) Section C: 32 marks (structured type questions) **Paper 2 (60%, max. 35h) - Coursework** Involves background study, decision making, exploration, planning, execution and evaluation (to present in presentation format, max. 35 slides)
Considerations to make before deciding to take the subject.	Ask yourself… • Do I have a passion for culinary skills & nutrition & food science? • Do I like process based and skills-based curriculum? • Process skills in research development, analysis and decision making to develop ideas towards a solution for the food task? • Planning and execution of designed solution of food task using appropriate cooking techniques and methods? • Am I an effective person in the learning and usage of Microsoft Word & to type content within time limit? e.g. Coursework report writing for express O level is approximately 16 pages. • Am I an analytical person and able to use data effectively to design the food task? • Am I an organised person who is able to meet timeline? • Am I ready to cook 3-4 dishes within 2 hrs, including wash up & plating?
Progression opportunities	Benefits for progressions to ITE & Polytechnics: Coursework exposure equips students to handle the modular structure of ITE and Polytechnic courses, resembling coursework in each module. Related Polytechnic Courses: • Food Science and Technology, Food Science and Nutrition, Food, Nutrition and Culinary Science, Applied & Health Science

FAQ

Q	Question	Applicable for		
		G3	G2	G1
	Operational			
1.	**When can my child select his/her subjects?** **The subject combination exercise will commence from 22 October 2026, 12.30pm to 27 October 2026, 5pm.** More information will be provided to you and your child in October during the last week of school.	Y	Y	Y
2.	**When can my child submit his/her appeal?** **What if my child does not get the choice combination?** Students can submit their appeals in hard copy to the general office from 5 November 2026, 12 noon (release of subject allocation – online) to 6 November 2026, 5pm.	Y	Y	Y
3.	**We are unable to submit an appeal against the allocation outcome, what can we do?** Please inform the following key personnels about the situation. • wun_boon_leng@schools.gov.sg • how_si_si_jacqueline@schools.gov.sg • lim_chee_khern_dennis@schools.gov.sg Please be reassured an arrangement will be made so that your child is not disadvantaged.	Y	Y	Y
4.	**Is it compulsory to participate in the subject combination exercise? What are the benefits for my child?** Yes, all secondary 2 students are required to participate in the subject combination exercise to choose the subjects they will read in Upper Secondary. Do note that for student who does not make a selection, the school will allocate the subjects based on student performance and availability of spaces.	Y	Y	Y
5.	**Can my child switch combination in the middle of Sec 3?** Once the subject combination exercise is completed after the appeal phase, all allocations are final. Students are expected to follow through with their allocated subjects in their upper secondary education. Hence, students and parents should make careful	Y	Y	Y

	decisions after considering their demonstrated abilities, and interests and aspirations.			
	Options			
6.	**My child is keen to take triple Science, is he allowed to do so?** Students who are interested to take all three sciences (Physics, Chemistry, Biology) may consider taking one pure Science and one Combined Science. For example, Chemistry with Science (Physics, Biology).	Y		
7.	**My child in G2 is taking G3 Science. Can he take Pure Science at G3 Level standard?** G2 students taking Science at G3 level and are interested to pursue science at a higher level are offered Combined Science at O-Level. This recognises students' interest to broaden their understanding of Science while ensuring they can commit to doing well for their other subjects. This increases their chances of progressing to a post-secondary course of their choice.		Y	
	Eligibility			
8.	**Are students allocated subjects based on their grades or interest? If my child didn't hit subject-specific criteria, can we appeal? What if my child misses the criteria by a few marks? Will the school accept him?** Subjects are allocated based on a variety of factors. Students have to meet subject-specific criteria and be assessed to be suitable by teachers. Criteria set are intended to ensure students will be able to manage more demanding subjects at Upper Secondary. Allocation of popular subjects which are over-subscribed is based on order of merit. Subjects to be offered are contingent on availability of resources and demand. Students who are very interested in a subject but missed the criteria marginally can still opt or appeal for the subject. Ranking order of choices of combination/subjects is one of the factors that will be considered in the allocation.	Y	Y	Y
9.	**Is there a quota for the number of students in a subject?** The number of places for each subject is dependent on the nature of the subject and resourcing. Most subjects can accommodate up to 40 students. Other subjects like D&T, NFS etc with a higher teacher:student ratio take up to 20 students generally.	Y	Y	Y

	School support			
10.	**How do teachers help students to understand which subject combination to choose and how it affects their future?** **How do we decide which subject to choose when my child is not firm about his marks or interest?** Students can approach their form teachers, subject teachers or ECG counsellor to find out more about the subject combination available and the advantages of reading a particular subject in their post-secondary education. Our teachers will also be able to share with them the demand of the subjects and provide advice to our students based on their current academic performance to help them make more informed choices. By sharing their interest and future career aspiration with our teachers, teachers are better able to guide our students to relevant resources where they can find out more about the course and career they are interested in, and the pre-requisites.	Y	Y	Y
11.	**How can I help my child know more about her interest?** It is recommended that parents have regular conversations with your child to find out their interest and aspirations. You can research post-secondary courses together with your child by visiting the websites of Institutes of Higher Learning and the SkillsFuture portal.	Y	Y	Y
12	**My child wants to be a vet. What subjects should I do?** Your child may wish to make an appointment with the school's ECG counsellor – Mr Andrew Lum. Monday to Friday 8am to 4pm @ ECG Room (next to Staff Room, Level 2) Email: lum_kah_wai_andrew_a@schools.gov.sg or Appointment booking: https://go.gov.sg/ecgbmss	Y	Y	Y