



**NAVAL BASE SECONDARY SCHOOL
SECONDARY 3 EXPRESS COURSE**

Information on Subject Combinations for 2023

Dear Secondary 2 Navalites and Parents,

This set of information aims to brief Navalites on the 2023 Secondary 3 Subject Choice Exercise so that they can make informed choices on their subject options. It is important that our Navalites' choice of subjects is based on their academic inclinations and strengths, interests and aptitudes.

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[1] EVERY PARENT A SUPPORTIVE PARTNER

In working closely with our Navalites' parents on your child's subject combinations, we honour our Navalites' choice of subjects, based on their academic inclinations and strengths, as well as their interests and aptitudes.

1. Allocation of subjects

The subject combinations offered to the students will be based on their overall academic performance, availability of school resources and vacancies in each option.

In helping your child make the best-informed decision for their Secondary 3 Subject Combination, you may want to consider your child's interests, academic strengths as well as aspirations.

2. Tips on how you can contribute to your child's development

- Monitor your child progress and development with reference to the targets set
- Help your child to be a self-directed learner
- Communicate with them and ask what support they need
- Be a keen observer and look out for warning signs that your child is facing some issues, e.g. difficulty in doing homework, breaking of school rules, gaming addiction
- Inform school or Form Teachers if you notice such behaviour, so that the school can partner with you to provide the support for your child
- Create a positive home learning environment

3. Other Important Information

- a) Frequently Asked Questions (Annex A, pg. 21 – 22)
- b) A Guide for Parents in Education and Career Guidance (ECG) (Annex B, pg. 23)

[2] SECONDARY 3 SUBJECT CHOICE EXERCISE SCHEDULE

Term / Wk / Date	Description
T4 W5-6	Subject Choice Exercise
Wed 9 Nov	Release of Subject Choice Results Start of Appeal
Sun 13 Nov	End of Appeal
Mon 21 Nov	Release of Subject Choice Appeal Results

[3] SECONDARY 3 EXPRESS SUBJECT COMBINATIONS

	Subject 1	Subject 2	Subject 3	Subject 4	Subject 5	Subject 6	Subject 7	Subject 8	Characteristics of Option
A	EL	MTL	Math	SS with Geo/ Hist/ Lit Elective	Chemistry	Biology <i>or</i> Physics	Add. Math	#Art	<ul style="list-style-type: none"> In-depth study of a contrasting combination of two Pure Sciences Prepares students to pursue Science-based courses at a JC or Polytechnic
B					Sci (Chem/Bio)	Pure Geography	Add. Math		<ul style="list-style-type: none"> Caters to students who wish to pursue an in-depth study of a Pure Humanities subject Flexibility to pursue Arts or Science-based courses at a JC or Polytechnic
C					<i>or</i>	POA	*Add. Math		<ul style="list-style-type: none"> Caters to students interested in business or finance-related courses at a Polytechnic Flexibility to pursue Arts or Science-based courses at a JC or Polytechnic
D					Sci (Chem/Phy)	Art <i>or</i> NFS	*Add. Math <i>or</i> POA		<ul style="list-style-type: none"> Caters to students interested in hands-on subjects such as Art and NFS, and business or finance-related courses at a Polytechnic Flexibility to pursue Arts or Science-based courses at a JC or Polytechnic

Notes:

Allocation of the above will be based on students' academic performance and aptitude, subjected to the availability of school resources.

A good pass in the respective lower secondary subjects is required to read Pure Geography, Pure Sciences and Additional Mathematics.

*Optional 7th subject:

- For Option C, students may choose to take Additional Mathematics as a 7th subject.
- For Option D, students may choose to take either Additional Mathematics or Principles of Accounts as a 7th subject.

#For Option A, students may choose to take Art as an 8th subject if they attain a very good pass in Art.

[4] INTRODUCTION TO UPPER SECONDARY SUBJECTS

A. HUMANITIES

HUMANITIES

Humanities is a compulsory subject in the GCE examination. It comprises a compulsory component, Social Studies and an elective component, namely the Geography Elective, History Elective or English Literature Elective.

All students have to choose **one** of the 3 elective components.

Elective: Geography

Brief Description

The overarching theme of sustainable development in the Geography syllabuses aims to deepen students' understanding of the impact of human activity on environmental sustainability and vice versa. The study of Geography provides opportunities for students to understand sustainability-related challenges around the world including Singapore in an integrated way, providing students with the kind of synthesis and holistic thinking needed to inspire them to take action to achieve a more sustainable world. Teaching with inquiry is a signature pedagogy in Geography. Using real-world contexts to assess students' understanding help stimulate a variety of field conditions for questions testing students' fieldwork competencies.

Students will:

- Acquire knowledge and skills to describe, explain and analyse geographical phenomena and processes that occur in Singapore and beyond;
- Examine selected geographical phenomena and process by analysing data;
- Be aware of different value orientations towards the environment, which influence people's actions;
- Be imbibed with sense of responsibility towards the environment; and
- Be provided with opportunities to discuss solutions and take actions to achieve a more sustainable world

Examination Requirements

The syllabus is divided into four clusters of topics:

1. Geography in Everyday Life Cluster
2. Tourism Cluster
3. Climate Cluster
4. Tectonics Cluster

Assessment Format

3 structured questions from these clusters

- Geography in Everyday Life Cluster
- Tourism
- Climate or Tectonics

For students who...

have a keen interest in seeking an understanding of the physical and human environments as well as the interconnectedness among groups of people, and people and their environment.

Post-Secondary Options

You can continue to pursue the Geography subject at a greater depth at the 'A' Level. Students seeking admission to junior colleges (JCs) will need to include the Combined Humanities grade for their L1R5 aggregate computation. To pursue a polytechnic diploma, the Combined Humanities grade counts as one of the relevant subjects in computing the L1R4 aggregate.

Elective: History**Brief Description**

The History syllabus provides students with an understanding of the complexities of international relations. It aims to equip students with the knowledge and skills to understand how forces, events and developments of the past shaped today's world.

Students will:

- develop into confident, self-directed, critical and reflective thinkers
- understand how the past has been interpreted, represented and accorded significance for different reasons and purposes
- ask relevant questions about the past and examine a range of sources critically in their historical context to reach substantiated judgements about the past
- acquire necessary historical knowledge, understanding, dispositions and skills to understand the present and contribute actively and responsibly as local and global citizens

Examination Requirements**Topics:**

- The Making of the 20th Century Modern World, 1910s–1991
- Unit 1 – Challenges to European Dominance after World War I, 1910s – 1942
- Unit 2 – Developments in the Post-World War II World: The Cold War, 1940s – 1991

Question types:

- A) Source-Based Question (30%)
- B) Essay Question (20%)

For students who ...

- have an interest in current affairs
- are interested in how human actions and political events shape our world
- are able to carry out independent research learning

Post-Secondary Options

Students can continue to pursue the subject at a greater depth at the 'A' Level. Students seeking admission to Junior College (JC) will need to include the Humanities grade for their L1R5 aggregate computation. To pursue a polytechnic diploma, the Humanities grade counts as one of the relevant subjects in computing the L1R4 aggregate.

Elective: English Literature

Brief Description

The Literature elective is the critical study of how language is purposefully and creatively used in texts in order to create meaning. The subject encourages students to enter imagined worlds and examine issues and themes pertinent to humanity.

Some themes you will wrestle with include:

Identity, Family, Human Nature, Death, Discrimination, Modernity and Nature

For students who...

- Appreciate the aesthetic value of language
- Desire new ways of perceiving the world around them
- Enjoy examining human nature and its condition
- Enjoy reading and writing extensively

Students will learn to...

- Closely analyse how writers' choices of form, structure and language create meaning
- Craft coherent responses informed by close readings of texts
- Engage personally with a variety of texts and draw connections between the texts, their lives and the world
- Develop intellectual, emotional, socio-cultural, and global awareness

Examination Requirements

- Passage-based and essay questions based on set prose text (50%)
- Unseen prose and poetry analysis essay questions (50%)

Prerequisite

Students should attain at least a B3 in English Language. English language is taken into consideration as the subject focuses on analysing and responding to the use of English Language.

Post-Secondary Options

You can continue to pursue the Literature subject at a greater depth at the 'A' Level. Students seeking admission to junior colleges (JCs) will need to include the Combined Humanities grade for their L1R5 aggregate computation.

To pursue a polytechnic diploma, the Combined Humanities grade counts as one of the relevant subjects in computing the L1R4 aggregate. Students who studied English Literature will also have an advantage in humanities, media and communication courses that involve the purposeful and creative use of English language.

Future career options

Students are equipped with a wide range of soft skills that give them versatility to take on any profession that they may wish to take up.

PURE GEOGRAPHY (ONLY FOR COMBINATION B)

Brief Description

Geography is an individual subject that emphasises the integrative study of physical and human environments to enable students to gain 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. As a subject, Geography builds on students' experiences and prior knowledge to examine the physical and human phenomena found on Earth as well as their complex interactions and patterns across space.

Students will:

- Acquire knowledge of the characteristics, distribution and processes of physical and human phenomena
- Develop a holistic understanding of physical-human relationships at local, regional and global scales
- Gain geographical insights and global awareness into future challenges through the study of current issues and their management case studies of different physical-human relationships
- Become inquiring and self-directed learners who ask geographical questions and seek understanding through the collection and analysis of geographical information.
- Develop skills in communicating and applying geographical knowledge.

Examination Requirements

The syllabus is divided into five clusters of topics:

1. Geography in Everyday Life Cluster
2. Tourism Cluster
3. Climate Cluster
4. Tectonics Cluster
5. Singapore Cluster

Assessment Format

Paper 1 (50%)	3 structured questions from these clusters <ul style="list-style-type: none"> • Geography in Everyday Life Cluster • Tourism • Climate
Paper 2 (50%)	3 structured questions from these clusters <ul style="list-style-type: none"> • Geography in Everyday Life Cluster • Tectonics • Singapore

For students who...

have a keen interest in seeking an understanding of the physical and human environments as well as the interconnectedness among groups of people, and people and their environment.

Prerequisite

Students should attain at least a B3 in Sec 2 Geography. Students who intend to pursue Pure Geography subjects should note that the level of rigour is high and students must have a strong level of perseverance and good attitude to manage the subject.

Post-Secondary Options

You can continue to pursue the Geography subject at greater depth at the 'A' Level. Students seeking admission to junior colleges (JCs) can include the Pure Geography grade for their L1R5 aggregate computation. To pursue a polytechnic diploma, the Pure Geography grade can count as one of the relevant subjects in computing the L1R4 aggregate.

B. ADDITIONAL MATHEMATICS

Brief Description

In the Singapore secondary mathematics curriculum, Additional Mathematics consists of 3 strands:

- Algebra – This is an important branch in mathematics that provides students with the language and tools to represent abstract ideas, relationships and patterns using concise symbols
- Geometry and Trigonometry – Geometry deals with points, lines (curves) and angles, their relationships and links. The learning of geometry helps students develop the spatial visualisation skills, which complement and support the mathematical skills from other branches of mathematics. Trigonometry supports the learning of geometry and is important in the studies of periodic behaviour, phenomena and models that they may encounter in higher learning.
- Calculus – Calculus deals with the concept of change. It is used in many fields of study including the physical sciences, computer science, economics, business, engineering and medicine. It involves abstract concepts and processes involving infinitesimal quantities and changes and limiting operations. As such, this section demands a strong foundation in Algebra and Geometry from the student.

Prerequisite

Students should have attained at least B4 in mathematics before considering opting for Additional Mathematics. The student has to be strong in Algebra and Geometry to cope with the subject. In addition, a hardworking attitude and lots of perseverance is needed because Additional Mathematics requires regular work and much practice to master.

Examination Requirements

The examination requirement is outlined in the table below. All questions are to be answered.

Paper	Duration	Marks	Weighting
Paper 1	2 hr 15 min	90	50%
Paper 2	2 hr 15 min	90	50%

Post-Secondary Options

The syllabus will prepare you adequately for polytechnic courses and A-level H2 Mathematics and H3 Mathematics, where a strong foundation in algebraic manipulation and mathematical reasoning skills are used.

Additional Mathematics is **not** a compulsory subject for students who aspire to study in a JC. Students without Additional Mathematics background but wants to take H2 Mathematics at A-levels can be offered at certain JCs. These JCs do offer H2 Mathematics to students without Additional Mathematics background but exhibits strong foundation in Mathematics and passing the school's internal proficiency test.

C. SCIENCES

Brief Description

The study of science at the secondary school is to prepare students for further studies in scientific enquiry at post secondary level, e.g. JC, polytechnic, university. There are 3 basic branches of Science:

1. *Physics* – The word, Physics, is derived from the Greek word, *phusis*, which means “Nature”. It is concerned with the underlying principles of the natural world, and deals with the elementary constituents of the universe, that is, all classes of matter and energy, and their interactions, as well as the analysis of systems which are best understood in terms of their fundamental principles. Mathematics is widely used as a basis to formulate the framework and principles.
2. *Chemistry* – The word, Chemistry, is derived from the Greek word, *chemeia*, which means “pour together”. It deals with the composition and statistical properties of matter and structures, as well as their transformations and interactions to become materials encountered in everyday life. According to modern chemistry, the physical properties of materials are generally determined by their structure at the atomic scale which is determined by the properties and energies of the interactions.
3. *Biology* – Biology, essentially the study of Life, is concerned with the characteristics, classification, and behaviours of organisms, how species come into existence, and the interactions they have with each other and with the environment. Biology encompasses a broad spectrum of academic fields that are often viewed as independent disciplines. However, together they address phenomena related to living organisms (biological phenomena) over a wide range of scales, from biophysics to ecology. All concepts in biology are subject to the same laws that other branches of science obey, such as the laws of thermodynamics and conservation of mass.

Students will:

- become confident citizens in a technological world and able to develop an informed interest in matters of scientific importance
- recognise the usefulness and limitations of scientific method and to appreciate its applicability in other disciplines and in everyday life
- develop abilities and skills that are useful in everyday life and in effective communication
- develop values, ethics, and attitudes relevant to science
- develop interest in and care for the local and global environment

The school offers **Pure Sciences** and **Combined Sciences** for the Express course.

In Naval Base Secondary, the Pure Sciences comprise of Chemistry (compulsory) and another Science subject (Physics or Biology).

Combined Sciences comprises a compulsory Science component, Chemistry and another Science component (Physics or Biology).

All students have to choose **one** of the 2 science components.

Prerequisite

Students should attain at least a B4 in science and mathematics before opting for Pure Sciences. Students who intend to pursue Pure Science subjects should note that the level of rigour is high and students must have a strong level of perseverance and good attitude to manage the subject.

As a guide, the content of the component subjects of Combined Science is about 70% of each individual pure science subject. Students should note that it is important to be able to cope with both components equally well in order to do well. For example, students pursuing Science (Physics/Chemistry) must do equally well in the Physics and Chemistry components in order obtain a good grade for the subject.

Examination requirements

Pure Sciences

Paper	Type of paper	Duration	Marks	Weighting
1	Multiple Choice	1h	40	30%
2	Structured / Free Response	1h 45min	80	50%
3	End-of-course (EOC) practical	1h 50min	40	20%

Combined Sciences

Paper	Type of paper	Duration	Marks	Weighting
1	Multiple Choice	1h	40	20%
2	Structured / Free Response (Physics)	1h 15mins	65	32.5%
3	Structured / Free Response (Chemistry)	1h 15mins	65	32.5%
4	Structured / Free Response (Biology)	1h 15mins	65	32.5%
5	Practical	1h 30mins	30	15%

**Candidates attempt 2 Papers from Papers 2, 3 and 4.*

Post-Secondary Options

Science subjects at the secondary level prepare pupils for the next phase of education, i.e. for JC and polytechnic education. Firstly, due to the government's promotion of the life sciences and the relaxing of subject pre-requisites. Therefore, most science-related polytechnic courses now accepts any science subject as a pre-requisite for studying that course. However, students who have exposure to Physics will have an advantage when they pursue Engineering related courses in polytechnics and University.

Secondly, with the increasing influence of Life Sciences, students who have exposure to Biology will have an advantage when they pursue Life Science courses in the polytechnics, or pursue Life Science subject combinations in JC. However, students should note that Chemistry, and not Biology, is the compulsory subject for university studies in Life Sciences degree programmes. Thus, for those who are thinking of a career in Life Sciences, it is important to have studied Chemistry, either as a pure subject or a Combined Science option, during the secondary school education.

Thirdly, for those who are considering between a JC education and a Polytechnic education, it is important to note that the main difference between the two routes is that JC education is an intermediate stage for those who intend to pursue university education whereas Polytechnic education is more industrial-based. Thus, the JC curriculum is academic and broad-based, similar to the secondary school. On the other hand, students who pursue polytechnic education will have an early route to specialise in their field of interest and then pursue further specializations if they proceed to university.

D. ART

Brief Description

The aims of the O-level Art syllabus are to:

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

During the course of their study of Art, students will be engaged in the creation of artworks. They will hone their observation skills, learn to identify visual qualities and give form to their ideas and experiences when they are engaged in art-making. They would also be given opportunities to explore and experiment with a good range of media and techniques.

Further, through the study of visual arts, students will develop visual literacy and critical thinking skills such as description, analysis, interpretation and evaluation. It provides students with the opportunities to respond to and discover insights from artists/artworks. These learning experiences inculcate in students greater appreciation for the visual arts and their role in society.

The art programme at NBSS strives to provide pupils with authentic experiential learning through programme tie-ups with museums, annual art exhibitions and more.

Examination Requirements

Candidates are required to sit for two papers, namely *Paper 1: Coursework* and either *Paper 2: Drawing & Painting* or *Paper 3: Study of Visual Arts*.

Paper	GCE O-Level	Exam Duration	Weighting
Paper 1: Coursework	The question paper will be issued to the students in the month of January of the examination year. Six themes will be issued and students are to develop and create an artwork in a medium of their choice in response to one of the themes. Preliminary studies of eight A2 boards must be submitted along with the final artwork. The deadline for the submission of the coursework is in September of the examination year.	Not applicable	60%
Paper 2: Drawing and Painting	The question paper be given three weeks before the start of the O-level examinations. Six themes will be issued and students are to develop and create a two-dimensional artwork in response to one of the themes. Preliminary studies of three to five A3 sheets of paper must be submitted. Students will produce the final artwork during the 3-hour examination.	3 hr	40%

Paper 3: Study of Visual Arts	Candidates will sit for a two-hour written examination. The paper comprises two sections: <ul style="list-style-type: none"> • Section A: Two structured questions will be set, each accompanied by a visual stimulus • Section B: Two structured comparison questions will be set, each accompanied by a pair of visual stimuli Candidates must answer one question in Section A, one question in Section B and one question from either Section A or Section B.	2 hr	40%
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For students who ...

- love to draw or engage in other forms of artmaking
- enjoy the creative process
- enjoy expressing themselves visually

Post-Secondary Options

For students pursuing the A-level route, Art may be offered at H1, H2 or H3 levels. For those pursuing the polytechnic route, the subject counts as one of the relevant subjects for art-related courses such as Visual Communications, Architecture and Interior Design. Students could also choose to further develop their passion in Art at the Nanyang Academy of Fine Arts or LASALLE College of the Arts.

E. NUTRITION AND FOOD SCIENCE

Brief Description

The Nutrition and Food Science (NFS) syllabus provides students with a broad understanding of concepts in nutrition and health, food literacy and principles of food science. Students will be exposed to authentic real-world contexts through hands-on practical and coursework. Through these learning experiences, the syllabus aims to develop students to:

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

NFS students will be provided the opportunity to extend and apply their learnt knowledge into their coursework assignments. This involves researching of a given task; decision making; development of a plan; recording and interpreting experimental results and a methodical approach in the production and presentation of the final products. They will conduct sensory evaluation of the dishes prepared and evaluate the outcomes of the execution process.

Examination requirements

Paper	Type of paper	Duration	Marks	Weighting
1	Written paper consisting of 3 sections	2h	100	40%
	Section A: Multiple choice questions		15	
	Section B: Short answer and data-response type questions		55	
	Section C: 2 Open-ended questions		2x15	
2	Coursework	-	80	60%

For students who...

- have an interest in advocating nutrition and health for self, family and the community
- appreciate how a variety of food is used in food management and take into consideration the issue of food security, which includes food safety and sustainable food consumption
- have a desire to be a food innovator and apply scientific principles during food preparation and cooking

Post-Secondary Options

This subject counts as one of the relevant subjects for admission to polytechnic in courses such as sports and exercise sciences, nursing, applied food science and nutrition, baking and culinary science and culinary and catering management. Aspiring students who wish to further their studies related to food science and nutrition in the university can opt for a BSc (Hons) in Dietetics and Nutrition at Singapore Institute of Technology.

F. PRINCIPLES OF ACCOUNTS

Brief Description

The main thrust of the syllabus is on developing basic fundamentals of accounting with a good understanding of the rationale and underlying principles for preparing accounting information. The focus is on basic double-entry book-keeping method, from which students develop the ability to prepare and analyse financial statements.

The course aims to enable students to:

- acquire knowledge and understanding of fundamental accounting concepts, conventions, principles, procedures and techniques in the context of business aims and activities;
- develop an understanding of the role of accounting in providing an information system for monitoring and decision making;
- develop skills in analysing, preparing and interpreting accounting information and understanding their implication;
- develop skills of numeracy, information technology literacy, communication, inquiry, presentation and interpretation;
- develop attitudes of accuracy, orderliness and logical thought and an appreciation of professional ethics such as integrity, objectivity and independence.

For students who...

- have an interest in learning about the business environment and types of decisions people make and how accounting information impacts those decisions
- have a liking for calculations and 'number-crunching'

Examination Requirements

Paper	Type of paper	Duration	Marks	Weighting
1	Written paper	1h	40	40%
2	Written paper	2h	60	60%

Post-Secondary Options

The Principles of Accounts grade counts as one of the relevant subjects in computing the L1R4 aggregate for admission into polytechnics. Pupils who pursue polytechnic courses in Accountancy, Business, Banking and Finance with specialisations in insurance, entrepreneurship, tourism and resort management will find their Principles of Accounts knowledge useful in their study of these courses. Students who aspire to further their studies in the university can opt for a Degree in Accountancy or Business Studies.

G. ADDITIONAL SUBJECTS

Students choosing a non-coursework subject combination¹ have the option of offering one of the following as an additional subject:

- Art (O-level)
- Music (O-level) at an O-level Music Centre [for students who have already applied in May 2022]

This subject will be offered in addition to their chosen subject combination and will be held outside of normal curriculum hours in the afternoons. Typically, for each subject, lessons will be held on one afternoon weekly for approximately 3 hours.

To be eligible to offer an additional subject, students must demonstrate the ability to manage the extra load that the additional subject will bring. They must also demonstrate proficiency in the subject that they are planning to offer. Considerations for offering the subject should include:

- Overall performance in the Secondary 1 and 2 examinations
- Performance in the subject at Secondary 1 and 2
- General learning attitude and disposition
- Level of interest and aspirations in areas related to the subject
- External involvement in activities relating to the subject, e.g. skills qualifications, etc.

Information regarding the Art syllabus may be found on pages 12 – 13.

¹ A non-coursework subject combination is one that does not include Art, Music, Nutrition & Food Science, or Design & Technology.

[5] POST SECONDARY EDUCATION OPTIONS

AFTER SECONDARY SCHOOL / GCE O LEVELS

There are a variety of Post-Secondary Education Institutions (PSEIs) available for secondary school graduates.

Junior College	Polytechnic	Institute of Technical Education
<p>Education in a junior college or Millennia Institute (MI) prepares students for the A-Level examinations or the International Baccalaureate (IB) diploma at the end of the 2-year JC or 3-year MI course.</p> <p>JC and MI graduates will receive an A-Level certificate. Graduates from Anglo-Chinese School (Independent) and St. Joseph's Institution will receive the IB Diploma.</p> <p>After completing the GCE A-Level examination, depending on your interests, strengths and learning goals, you can attend:</p> <ul style="list-style-type: none"> • A university • A polytechnic • An art institute 	<p>Polytechnics provide hands-on, practice-based learning experience within a dynamic and progressive learning environment. Work attachments with industry partners, which ranges from 6 weeks to 6 months, are also offered as part of the curriculum.</p> <p>Polytechnic graduates who wish to further their studies may be considered for admission to universities based on their diploma qualifications.</p> <p>The polytechnics also provide programmes at diploma and post-diploma levels, including Work-Study Post-Diplomas, for adult learners who want to deepen their skills across a range of disciplines and industries.</p>	<p>The Institute of Technical Education (ITE) provides technical and vocational education for students through full-time Nitec, Higher Nitec courses, or traineeship programmes conducted in partnership with employers.</p> <p>They typically admit N-Level holders into Nitec courses, and O-Level holders into Higher Nitec courses. Eligible Secondary 4 Normal (Academic) students can also apply for entry to selected Higher Nitec courses through the Direct-Entry-Scheme to Polytechnic Programme, which prepares students for progression into polytechnic diploma courses.</p> <p>ITE graduates who wish to further their studies can also be considered for admission to the polytechnics, ITE's Work-Study Diploma and Technical Diploma programmes, based on their Nitec or Higher Nitec qualifications.</p>

Other Options

- For Nanyang Academy of Fine Arts / LASALLE College of the Arts, contact your Art/Music teacher to learn more
- Still unsure? Contact our Education and Career Guidance Counsellor, Ms Jerlyn Poh (pg. 21) to learn more

ENTRY REQUIREMENTS FOR JUNIOR COLLEGE

Admission Criteria

- **L1R5** of 20 points and below
- A1 – C6 for English Language
- A1 to D7 for MTL and E Math or A Math

Aggregate Computation: **L1R5 : For Junior College Course**

First Language	English Language / Higher Mother Tongue
Relevant Subject 1	Humanities
Relevant Subject 2	Mathematics / Science
Relevant Subject 3	Humanities / Mathematics / Science
Relevant Subject 4	Any GCE 'O' Level subjects (except Religious Knowledge)
Relevant Subject 5	Any GCE 'O' Level subjects (except Religious Knowledge)

ENTRY REQUIREMENTS FOR MILLENNIA INSTITUTE

Admission Criteria

- **L1R4** of 20 points and below
- A1 – C6 for English Language
- A1 to D7 for MTL and E Math or A Math

Aggregate Computation: **L1R4: For Millennia Institute Course**

First Language	English Language / Higher Mother Tongue
Relevant Subject 1	Humanities (H) / Mathematics (M) or Science (S)
Relevant Subject 2	Humanities (H) / Mathematics (M) or Science (S)
Relevant Subject 3	Any GCE 'O' Level subjects (except Religious Knowledge)
Relevant Subject 4	Any GCE 'O' Level subjects (except Religious Knowledge)

ENTRY REQUIREMENTS FOR POLYTECHNICS

ELR2B2: For Polytechnic Courses						
<ul style="list-style-type: none"> • English Language (EL) • 2 Relevant Subjects (R2) + • 2 other Best Subjects (B2) excluding co-curricular activities (CCA) 						
Aggregate Type	Humanities, Media (ELR2B2-A)	Business (ELR2B2-B)	Engineering, Science, IT (ELR2B2-C)	Architecture, Design (ELR2B2-D)		
EL	English					
R2	1 st Group of Relevant Subject	Art Comb Hum Geography Music	Elementary Mathematics Additional Mathematics			
	2 nd Group of Relevant Subjects	A Math	Art	Biology	Art	
		Art	Comb Hum	Chemistry	Biology	
		Comb Hum	POA	D&T	Chemistry	
		E Maths	Geography	NFS	D&T	
		NFS	Music	Physics	NFS	
		Higher MTL		Sc(Phy/Chem)	Physics	
		POA		Sc(Chem/Bio)	Sc(Phy/Chem)	
		Geography			Sc(Chem/Bio)	
	MTL					
B2	Best 2 other subjects excluding CCA					

ENTRY REQUIREMENTS FOR INSTITUTE OF TECHNICAL EDUCATION

ELB4, ELR1B3 and ELR2B2 : For ITE Higher Nitec Courses					
Aggregate Type	Design & Media (ELB4-A)	Business Courses (ELR1B3-B)		Applied Sciences / Engineering / Infor-Comm Technology Courses (ELR2B2-E)	
EL	English	EL	English		EL
B4	Best 4 other subjects excluding CCA	R1	E Math A Math POA	E Math A Math	1 st Group of Relevant Subjects
		B3	Best 3 other subjects excluding CCA	Biology	2 nd Group of Relevant Subjects
				Chemistry	
				Physics	
				Chem/Bio	
				Phy/Chem	
B2	Best 2 other subjects excluding CCA				

ANNEX A: FREQUENTLY ASKED QUESTIONS (FAQ)

STREAMING PROCEDURE

Q1. When and how will the subject choice exercise be conducted?

The subject choice exercise will be conducted in October 2022. Students will log onto an online portal to exercise their options. Please refer to the timeline on page 1 for more details.

Q2. If my child/ward is not allocated the combination/elective of choice, can we appeal?

Yes. The appeal can be conducted online from **9 – 13 Nov 2022** once the subject choice results are released.

Q3. Who can I contact should I need further clarifications?

You can contact Mr Andrew Lim (andrew_lim_swee_leong@schools.gov.sg) or Mr Tharmendra Jeyaraman (tharmendra_jeyaraman@schools.gov.sg) via email or at 62571996.

SUBJECT CHOICES

Q4. My child is unsure of which combination would benefit her in the future. Should he/she go to a JC/poly? What should she do?

We strongly encourage parents to discuss with your child/ward on his/her interests, learning styles and explore possible tertiary options. Your child/ward may see their Form Teachers or our Senior Education and Career Guidance counsellor, Ms Jerlyn Poh, whom he/she can make an appointment with to explore his/her possible options.



What subject combination should I choose?



Is JC/Poly/ITE best for me?



Should I apply for EAE/DSA/JAE?



I want to prepare for my interview for the admission selection

ECG Counsellor, Ms Jerlyn, is available at the library's ECG corner on Tuesday and Thursdays from 8am to 5pm. You can book a session by clicking the https://calendly.com/ecgc_msjerlyn/nbss or contact via telegram by search @ecgc_jp or https://t.me/ecgc_ip



NAVAL BASE SECONDARY SCHOOL

Enikatur In Aiklora (Be Our Best)



Q5. Is Additional Mathematics a compulsory subject for admission into JC or polytechnic?

No, polytechnic admission only requires English Language, 2 relevant subjects and 2 other best subjects. For engineering courses, the relevant subjects must include Mathematics and/or Science, depending on course. For Mathematics, this could be either Elementary Mathematics or Additional Mathematics, whichever has a better grade. Same criteria apply for JC unless the student wants to pursue a Science course.

Q6. What should I consider when choosing between pure science and combined science?

Students are encouraged to opt for pure sciences if:

- they would like to pursue science or science-related courses in Polytechnics or Junior Colleges.
- they are considering Engineering or science related careers.

Students who are:

- analytical and enjoy in-depth learning
- able to see relationship eg. interpret data and graphs
- focused, precise and detailed
- able to visualise and make connections to real-life applications
- enthusiastic by the depth and breadth of pure science.

Q7. Will I be able to meet the requirements of polytechnic courses if I do not read O level pure sciences?

Students are required to take at least one science subject, and Pure Sciences are not prerequisite to pursue Poly courses including Engineering / Life Science courses.

Q8. I am interested in doing Medicine in NUS / NTU. Do I need to take Triple Science or Biology?

To do Medicine in NUS (Yong Loo Lin School of Medicine) / NTU (Lee Kong Chian School of *Medicine*), a student is only required to have a good H2 pass in Chemistry and a good H2 pass in either Biology or Physics at A level. This means that students need to do well in Chemistry and either Biology or Physics at O level in order to continue to pursue these subjects at A level.

Do refer to the university websites for more information on the subject prerequisites.

ANNEX B: A GUIDE FOR PARENTS IN EDUCATION AND CAREER GUIDANCE (ECG)

All parents want the best for their children and hope that they find happiness and purpose in life. It is important to recognise that you can play a significant role in the decisions your child makes for his or her life, especially at this crucial juncture.

Below are 7 ways you can be more involved in your child's education and career journey:

	Ways to be involved	Questions you can ask your child and other useful tips
1	Show concern and support for your child by engaging him or her using some conversation starters	<ol style="list-style-type: none"> 1. What are your favourite subjects and Co-Curricular Activities (CCA) in school? Why? 2. What are some of the things you take pride in? Why? 3. Which occupations would you like to explore in the future? Why?
2	Observe your child's strengths and Interests through various activities	Do you prefer working with people, data, things or ideas?
3	Listen and find out the schools or courses your child is interested in	<ol style="list-style-type: none"> 1. What are your interests, abilities and passion? 2. Are there learning and training programmes offered by the education institutions that can nurture your interests, abilities and passion? 3. What are your academic and career goals?
4	Introduce a variety of occupations to your child	<ol style="list-style-type: none"> 1. Start by talking about your own industry and career, and bringing your child to your workplace. 2. Explore the Education and Career Guidance (ECG) portal with your child for related information at ecareers.sg.
5	Support your child's aspirations by asking what his/her dream job is	<ol style="list-style-type: none"> 1. What qualification and skills do you need for the job? 2. What do you think you will like and dislike about this occupation? 3. What is expected of someone working in this industry and career? 4. How would you describe a day in this occupation?
6	Instill in your child the importance of developing transferable skills	<p>Transferable soft skills are needed to get a job and be successful in a career. Talk about the importance of the following:</p> <ol style="list-style-type: none"> 1. Communication Skills 2. Teamwork 3. Time Management 4. Problem-solving Skills
7	Model Lifelong Learning	Demonstrate how you continually strive towards excellence through knowledge and experience. Show your child that learning does not happen only in school, but throughout life.

Extracted from "Nurturing Dreams – Guiding Our children for their Future" – an ECG publication from MOE for parents.