# CHUNG CHENG HIGH SCHOOL (YISHUN)

# SECONDARY TWO NORMAL ACADEMIC ACADEMIC INFORMATION BOOKLET 2021

## CONTENTS

# ASSESSMENT MODES AND WEIGHTINGS

## EL, MTL, Science, Math, Hist, Geog, Lit, Art

| Subjects | Term 1 | Term 2 | | Term 3 | Term 4 | |
|---|---|---|---|---|---|---|
| | Weighted Assessment1 (WA1) | Weighted Assessment2 (WA2) | Summative Assessment1 (SA1) | Weighted Assessment3 (WA3) | Weighted Assessment4 (WA4) | Summative Assessment2 (SA2) |
| EL, MTL, Sci, Math, Hist, Geog Lit, Art | 10% | 10% | 20% | 10% | 10% | 40% |

## Modular Subjects (FCE, D&T)

| Subjects | Term 1 | Term 2 | | Term 3 | Term 4 | |
|---|---|---|---|---|---|---|
| | Weighted Assessment1 (WA1) | Weighted Assessment2 (WA2) | Summative Assessment1 (SA1) | Weighted Assessment3 (WA3) | Weighted Assessment4 (WA4) | Summative Assessment2 (SA2) |
| FCE (Semester 1) | 15 | 15 | 70 | - | - | - |
| D&T (Semester 2) | - | - | - | 15 | 15 | 70 |

# PROMOTION CRITERIA

| Level/Stream | Minimum Attainment for Promotion to Sec 3 |
|---|---|
| Sec 2NA to 3NA | Pass in English and 2 other subjects **OR**<br>Pass 4 subjects |

Students who do not meet the promotion criteria will either be retained at the same level or laterally transferred to a less demanding stream.

# LATERAL TRANSFER

| Level/Stream | Criteria for Lateral Transfer | Met Lateral Transfer Criteria |
|---|---|---|
| Sec 2NA | Minimum of 70% in the overall percentage of all subjects combined | Laterally Transferred to Sec 3Exp |

# Out-of-Stream (OOS) Subjects

- Every student is unique and possesses different strengths. Taking subjects at a higher academic level can help students nurture their strengths and give them more opportunities throughout their educational journey, so that they are more engaged in learning.

- Students in N(A) and N(T) courses can take higher-level subjects at Secondary 3, to build a stronger foundation in subjects that they are good at.

- Taking OOS subjects allows the students to challenge themselves, and to have more options for Sec 3 subject combinations and post-secondary courses.

- A strong foundation in literacy, numeracy and reasoning, would ensure students are better prepared for various post-secondary progression pathways (e.g. to ITE and Polytechnic).

# THE STREAMING EXERCISE

## A. Rationale and Factors Considered

- Provision of subjects based on students' interests, aptitude and profile
- Provision of a wide range of subjects to open up more post-secondary education options
- Consideration of the course entry requirements in JCs and Polytechnics
- Availability of manpower.

## B. Important Considerations in Choosing the Subject Combinations

- Interest in the subject – students tend to excel in the subjects they are interested in.
- Competency in the subject – it's a good indication that students can cope with the subject at a higher level.
- Understanding the demands of the subject:
  - Art requires observational drawing skills and D&T requires basic isometric drawing skills
  - Art, D&T and NFS are coursework subjects, which require good time management skills and consistent work.

## C. Criteria for Streaming

Students are streamed based on:

- Merit in terms of subject performance and overall results
- Minimum competency level for the subject
- Student's choices.

# 2022 SECONDARY THREE SUBJECT COMBINATIONS

## 3NA

| | SN | Subjects |
|---|---|---|
| **Students can choose 6 or 7 subjects** | 1 | English Language (NA or Express) |
| | 2 | Mother Tongue Language (NA or Express) |
| | 3 | Mathematics (NA or Express) |
| | 4 | Humanities<br>Choice of SS/Geo Elective **OR**<br>SS/Hist Elective |
| | 5 | Science (Physics and Chemistry) (NA **OR** Express) or<br>Science (Chemistry and Biology) (NA) |
| | 6 | Choice of Art **OR**<br>Design and Technology (D&T) **OR**<br>Principles of Accounts (POA) **OR**<br>Nutrition and Food Science (NFS) |
| | 7 | Additional Mathematics |

## Qualifying Criteria

| Subject | Criteria (based on Sec 2 OVERALL results in 2021) |
|---|---|
| English Language (Express) | Non-SBB: Score at least 75% in English Language (NA) **AND** 60% Overall<br>SBB: Pass in English Language (Exp) |
| Chinese Language (Express) | Non-SBB: Score at least 75% in Chinese Language (NA) **AND** 60% Overall<br>SBB: Pass in Chinese Language (Exp) |
| Malay Language (Express) | Non-SBB: Score at least 75% in Malay Language (NA) **AND** 60% Overall<br>SBB: Pass in Malay Language (Exp) |
| Mathematics (Express) | Non-SBB: Score at least 75% in Mathematics (NA) **AND** 60% Overall<br>SBB: Pass in Mathematics (Exp) |
| Science (Phy/Chem) (Express) | Non-SBB: Score at least 75% in Science (NA) **AND** 60% Overall<br>SBB: Pass in Science (Exp) |
| English Literature | Score at least 60% in English Literature |
| Art | Score at least 60% in Art and<br>Visualisation Check In Observational Drawing |
| Design & Technology | Score at least 60% in D&T and<br>Visualisation Check In Basic Isometric Drawing for Geometric Shapes |
| Principles of Accounts | Pass in Mathematics<br>Selection will be based on the performance in Maths and subjected to course vacancy. |
| Additional Maths (NA) | Score at least 65% in Mathematics (NA) OR<br>Pass in Mathematics (Exp) |
| Nutrition and Food Science | Selection will be based on the performance in FCE and subjected to course vacancy. |

# TIMELINE FOR STREAMING EXERCISE

| **Activities** | **Dates** |
|---|---|
| Streaming Talk for Students | 17 Aug |
| Sec 2 Mock Streaming Exercise (Familiarisation Exercise) | Start: 23 Aug<br>End: 27 Aug |
| Sec 2 Streaming Exercise | Start: 29 Oct<br>End: 1 Nov |
| Release of Sec 2 Streaming Exercise Results | 10 Nov |
| Appeal of Sec 2 Streaming Exercise | Start: 10 Nov<br>End: 11 Nov |
| Release of Sec 2 Streaming Appeal Results | 18 Nov |

# SUBJECT INFORMATION (NA)

**English Language (Code:1190)**

By the end of Secondary education, students will be able to communicate effectively in English as a result of their development in the following areas:

- **Listen, read and view** critically and with accuracy, understanding and appreciation of a wide range of literary and informational/functional texts from print and non-print sources.
- **Speak, write and represent** in internationally acceptable English (Standard English) that is grammatical, fluent, mutually intelligible and appropriate for different purposes, audiences, contexts and cultures.
- **Understand and use internationally acceptable English (Standard English) grammar and vocabulary** accurately and appropriately as well as understand how speakers/writers put words together and use language to communicate meaning and achieve impact.

GCE N-Level Exam Format

| Paper | Duration | Marks | Weighting | Content |
|---|---|---|---|---|
| Paper 1: Writing | 1 h 50 min | 70 | 35% | • Editing<br>• Situational Writing<br>• Continuous Writing |
| Paper 2: Comprehension | 1 h 50 min | 50 | 35% | • Visual Text<br>• Narrative Text<br>• Non-narrative Text |
| Paper 3: Listening | 45 min | 30 | 10% | • Listening Comprehension |
| Paper 4: Oral Communication | 20 min (approx) | 30 | 20% | • Reading Aloud<br>• Spoken Interaction |

**Mother Tongue Language: Chinese (Code:1196) / Malay (Code:1197)**

The main objectives in the teaching and learning of Mother Tongue Languages are:

- Students are able to listen and understand narrative, descriptive and functional texts.
- Students are able to express their views and feelings towards a topic and engage in conversations.
- Students are able to read and understand narrative, descriptive, argumentative and functional texts, as well as engage in literary appreciation.
- Students are able to write narrative, descriptive, argumentative and functional writings.

GCE N-Level Exam Format

| Paper | Duration | Marks | Weighting | Content |
|---|---|---|---|---|
| Paper 1 | 2 h | 60 | 30% | ● Functional Writing<br>● Composition |
| Paper 2 | 1 h 30 min | 60 | 30% | ● Language Usage<br>● Comprehension 1<br>● Comprehension 2 |
| Paper 3 | 15 min<br>30 min | 60<br>20 | 30%<br>10% | ● Oral Examination<br>● Listening Comprehension |

**Mathematics (Code:4045)**

The Mathematics syllabus aims to enable all students to:

- acquire mathematical concepts and skills for continuous learning in mathematics and to support learning in other subjects;
- develop thinking, reasoning, communication, application and metacognitive skills through a mathematical approach to problem solving;
- connect ideas within mathematics and between mathematics and other subjects through applications of mathematics;
- build confidence and foster interest in mathematics.

The concepts and skills covered in the syllabus are organised along 3 content strands: Number and Algebra, Geometry and Measurement, Statistics and Probability.

GCE N-Level Exam Format

| Paper | Duration | Marks | Weighting | No. of Questions |
|---|---|---|---|---|
| Paper 1 | 2 h | 80 | 50% | Answer all questions; 22 - 25 short structured questions. |
| Paper 2 | 2 h | 60 | 50% | Answer all questions in Section A (10 questions) and one question in Section B. |

**Science (Physics and Chemistry) (Code:5105)**

The N-Level Science (Physics) syllabus provides students with a coherent understanding of energy, matter, and their interrelationships. It focuses on investigating natural phenomena and then applying patterns, models (including mathematical ones), principles, theories and laws to explain the physical behaviour of the universe. The theories and concepts presented in this syllabus belong to a branch of physics commonly referred to as classical physics. Modern physics, developed to explain the quantum properties at the atomic and sub-atomic level, is built on knowledge of these classical theories and concepts.

The syllabus is organised based on:

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

The N-Level Science (Chemistry) syllabus is designed to place less emphasis on factual materials and greater emphasis on the understanding and application of scientific concepts and principles. This approach has been adapted in recognition of the need for students to develop skills that will be of long-term value in an increasingly technological world rather than focusing on large quantities of factual materials, which may have only short-term relevance.

The syllabus is organised based on:

- Experimental Chemistry
- Atomic Structure and Stoichiometry
- Chemistry of Reactions
- Periodicity
- Atmosphere
- Organic Chemistry

GCE N-Level Exam Format

| Paper | Duration | Marks | Weighting |
|---|---|---|---|
| Paper 1 (Physics): MCQ | 1 h 15 min | 20 | 20% |
| Paper 2 (Physics): Structured | | 30 | 30% |
| Paper 3 (Chemistry): MCQ | 1 h 15 min | 20 | 20% |
| Paper 4 (Chemistry): Structured | | 30 | 30% |

**Science (Chemistry and Biology) (Code:5107)**

The N-Level Science (Chemistry) syllabus is designed to place less emphasis on factual materials and greater emphasis on the understanding and application of scientific concepts and principles. This approach has been adapted in recognition of the need for students to develop skills that will be of long-term value in an increasingly technological world rather than focusing on large quantities of factual materials, which may have only short-term relevance.

The syllabus is organised based on:

- Experimental Chemistry
- Atomic Structure and Stoichiometry
- Chemistry of Reactions
- Periodicity
- Atmosphere
- Organic Chemistry

The N-Level Science (Biology) syllabus designed to have less emphasis on factual materials, but a much greater emphasis on the understanding and application of scientific concepts and principles. This approach has been adopted in recognition of the need for students to develop skills that will be of long-term value in an increasingly technological world, rather than focusing on large quantities of factual material, which may have only short-term relevance.

The syllabus is organised based on:

- Principles of Biology
- Maintenance and Regulation of Life Processes
- Continuity of Life

GCE N-Level Exam Format

| Paper | Duration | Marks | Weighting |
|---|---|---|---|
| Paper 3 (Chemistry): MCQ | 1 h 15 min | 20 | 20% |
| Paper 4 (Chemistry): Structured | | 30 | 30% |
| Paper 5 (Biology): MCQ | 1 h 15 min | 20 | 20% |
| Paper 6 (Biology): Structured | | 30 | 30% |

**Humanities (Social Studies + Geography) (Code:2175/01 and 2175/02)**

Students will offer Social Studies (Paper 1) and Geography (Paper 2). Each paper carries 50% of the weighting of the marks for Humanities.

## Social Studies (Code:2175/01)

The Social Studies syllabus seeks to develop the competencies of students to be informed, concerned and participative citizens. As informed citizens, they would evaluate information, consider different viewpoints and exercise discernment in reaching well-reasoned conclusions and make responsible decisions. As concerned citizens, they would appreciate the importance of engaging in issues of societal concern. They would develop into participative citizens who are resilient in addressing concerns of the community or society in spite of challenges faced.

Syllabus Content

The syllabus content is organised around 3 issues which correspond to societal issues that have been shaping Singapore society and the world.

Issue 1: Exploring Citizenship and Governance

Guiding Questions:

1. What does it mean for me to be a citizen of my country?
2. How do we decide on what is good for society?
3. How can we work for the good of society?

Issue 2: Living in a Diverse Society

Guiding Questions:

1. What is diversity?
2. Why is there greater diversity in Singapore now?
3. What are the experiences and effects of living in a diverse society?
4. How can we respond in a diverse society?

Issue 3: Being Part of a Globalised World

Guiding Questions:

1. What does it mean to live in a globalised world?
2. How do we respond to tensions arising from some economic impacts of globalisation?

GCE ‘N’ Level Exam Format

The examination consists of one paper.

| Section | Duration | Marks | Weighting |
|---|---|---|---|
| Section A: Source-based Case Study | 1 h 45 min | 35 | 35% |
| Section B: Structured Essay Question | | 15 | 15% |

**Geography (Code:2175/02)**

The syllabus is designed to develop geographical insights and global awareness into future challenges through the study of current issues and their management using examples at the local, regional and global scales. Students will explore geographical issues, seek understanding through the collection and analysis of geographical information, develop skills in communicating and applying geographical knowledge and make informed judgements and sound decisions through the analysis, synthesis and evaluation of geographical information.

Syllabus Content

There are three topics in themes 1 and 2 of the N-Level Geography syllabus. The heading for each of these topics is presented in the form of an overarching geographical question. Each topic is organised around either two or three key questions and these key questions serve as the organisational framework of the topic.

Theme 1: Physical Geography

Topic 1. Living with Tectonic Hazards: Risk or Opportunity?

Topic 2. Variable Weather & Changing Climate: A Continuing Challenge?

Theme 2: Human Geography

Topic 3: Global Tourism: Is Tourism the Way to Go?

Theme 3: Geographical Skills and Investigations which are developed when students learn the topics:

Geographical Skills and Investigations (Topic 2 and Topic 3)

Topographical Map Reading Skills (All topics)

Geographical Data and Techniques (All topics)

GCE ‘N’ Level Exam Format

The examination consists of one paper.

| Section | Duration | Marks | Weighting |
|---|---|---|---|
| Section A: Two structured questions on Geographical Investigations, based on:<br>● Global Tourism<br>● Variable Weather and Climate | 1 h 40 min | 13 | 13% |
| Section B: One structured question based on:<br>● Global Tourism | | 12 | 12% |
| Section C: Two structured questions based on:<br>● Living with Tectonic Hazards<br>● Variable Weather and Climate | | 25 | 25% |

**Humanities (Social Studies + History) (Code: 2176/01 and 2176/02)**

**Social Studies (Code:2176/01)**

Same as Code: 2175/01.

**History (Code:2176/02)**

The syllabus is designed to equip students with the necessary historical knowledge, understanding, dispositions and skills to understand the present and contribute actively and responsibly as local and global citizens.

It aims to engage students actively in historical inquiry to acquire knowledge and understanding of selected periods, societies and aspects of history. Students will understand how the past has been interpreted, represented and accorded significance for different reasons and purposes. They will explore a range of sources critically in their historical context, organise and communicate their historical knowledge to reach substantiated judgements about the past.

Syllabus Content

The N(A) – Level History Elective syllabus examines the key forces and developments which have shaped international history in the 20th century. It focuses on challenges to European hegemony and world peace.

There are 2 themes/units in this syllabus:

Unit 1: The World in Crisis

- Impact of World War One
- Rise of authoritarian regimes and its impact in the interwar years (Communist USSR and Nazi Germany)
- World War Two in Europe and the Asia Pacific

Unit 2: Bi-Polarity and the Cold War

- Cold War and the bi-polar world order
- Manifestation of the Cold War outside Europe (Korean War)

GCE N-Level Exam Format

The examination consists of one paper.

| Section | Duration | Marks | Weighting |
|---|---|---|---|
| Section A: Source-based Case Study | 1 h 40 min | 30 | 30% |
| Section B: Structured Essay Question | | 20 | 20% |

**Art (Code:6125)**

The Art syllabus is designed to provide students with the opportunity to give form and meaning to their ideas, thoughts and feelings through visual and tactile forms. The breadth and depth of study cater to a range of abilities and interests. The process of art making involving the use of a variety of media and technologies, as well as its role in the development of critical and creative thinking, continue to be maintained. Visual literacy skills, such as perceiving and responding to visual images, and analysis of visual information in its many forms, are further enhanced and developed in this syllabus. This document presents the aims, the framework, the learning outcomes, the content and the examination requirements of the Art syllabus.

GCE N-Level Exam Format

Candidates taking the GCE N(A)-Level Art Syllabus Examinations will be required to offer Paper 1: Coursework and Paper 2: Drawing and Painting.

| **Paper** | **Description** | **Examination Duration** | **Weighting** | **Requirement** |
|---|---|---|---|---|
| Paper 1 | Coursework | Not Applicable | 60% | Compulsory |
| Paper 2 | Drawing and Painting | 3 hours | 40% | Compulsory |

**Design and Technology (Code:7055)**

This Design & Technology (D&T) syllabus is designed to engage students in designing and prototyping ideas through applying technology. The students' learning leverages and builds on their experiences in design and technology, and 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.

GCE N-Level Exam Format

The assessment domains are weighted to give an indication of their relative importance. They are not intended to provide a precise statement on the number of marks allocated to a particular assessment domain.

| **Paper** | **Duration** | **Assessment Domains** | | | **Total** |
|---|---|---|---|---|---|
| | | **A Knowledge with Understanding** | **B Design Thinking Skills** | **C Design Manipulating Skills** | |
| **Paper 1**: Written Examination | 1 h 30 min | 25% | 10% | 5% | 40% |
| **Paper 2**: Design Project | 20 weeks | 15% | 20% | 25% | 60% |
| Overall | | 40% | 30% | 30% | 100% |

**Nutrition and Food Science (NFS) (Code:6073)**

The study of NFS builds a strong foundation in understanding the link between nutrition and good health, awareness in food sustainability and basic application of food science principles in the area of food preparation. Students will be cognizant of making informed food choices and in creating healthier food products.

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
- apply principles of culinary science creatively in food preparation and cooking

GCE N-Level Exam Format

| Paper | Duration | Marks | Weighting | Details |
|---|---|---|---|---|
| **Paper 1:** Written Paper | 1 h 30 min | 80 | 40% | Section A: MCQ (16 m)<br>Section B: Short answer and data-response questions (40 m)<br>Section C: Open-ended questions (24 m) |
| **Paper 2:** Coursework | 25 hours-Investigation and Practical Work | 60 | 60% | **Assessment Domains**<br>Research (6 m)<br>Decision Making (6 m)<br>Exploratory study (12 m)<br>Planning (6 m)<br>Execution (24 m)<br>Evaluation (6 m)<br><br>**Presentation of Coursework Report-15 to 20 pages** |

**Principles of Accounts (Code:7086)**

The syllabus aims to develop in students the knowledge and skills to prepare, communicate and use both accounting information and non-accounting information related to the business to make decisions. It also aims to help students to become users of accounting information and make informed decisions using both accounting and non-accounting business-related information.

GCE N-Level Exam Format

| Paper | Duration | Marks | Weighting | No. of Questions |
|---|---|---|---|---|
| **Paper 1** | 1 h | 40 | 40% | Answer 4 compulsory structured questions. |
| **Paper 2** | 2 h | 60 | 60% | Answer 4 or 5 compulsory structured questions. One question requires the preparation of financial statements for a business for one financial year (20 marks).<br><br>A scenario-based question will be part of one of the 3 remaining questions (5 marks). |

**Additional Mathematics (Code:4051)**

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

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

GCE N-Level Exam Format

| **Paper** | **Duration** | **Marks** | **Weighting** | **No. of Questions** |
|---|---|---|---|---|
| **Paper 1** | 1 h 45 min | 70 | 50% | Answer all the questions, 12 or 13 structured questions |
| **Paper 2** | 1 h 45 min | 70 | 50% | Answer all the questions, 9 or 10 structured questions |

# SUBJECT INFORMATION (EXPRESS)

**English Language (Code:1128)**

By the end of Secondary education, students will be able to communicate effectively in English as a result of their development in the following areas:

- **Listen, read and view** critically and with accuracy, understanding and appreciation of a wide range of literary and informational/functional texts from print and non-print sources.
- **Speak, write and represent** in internationally acceptable English (Standard English) that is grammatical, fluent, mutually intelligible and appropriate for different purposes, audiences, contexts and cultures.
- **Understand and use internationally acceptable English (Standard English) grammar and vocabulary** accurately and appropriately as well as understand how speakers/writers put words together and use language to communicate meaning and achieve impact.

GCE O-Level Exam Format

| Paper | Duration | Marks | Weighting | Content |
|---|---|---|---|---|
| Paper 1: Writing | 1 h 50 min | 70 | 35% | • Editing<br>• Situational Writing<br>• Continuous Writing |
| Paper 2: Comprehension | 1 h 50 min | 50 | 35% | • Visual Text<br>• Narrative Text<br>• Non-narrative Text |
| Paper 3: Listening | 45 min | 30 | 10% | • Listening Comprehension |
| Paper 4: Oral Communication | 20 min (approx) | 30 | 20% | • Reading Aloud<br>• Spoken Interaction |

**Mother Tongue Language: Chinese (Code:1160) / Malay (Code:1148)**

The main objectives in the teaching and learning of Mother Tongue Languages are:

- Students are able to listen and understand narrative, descriptive and functional texts.
- Students are able to express their views and feelings towards a more complex topic and engage in effective communications.
- Students are able to read and understand narrative, descriptive, argumentative and functional texts, as well as engage in literary appreciation.
- Students are able to write narrative, descriptive, argumentative and functional writings, as well as creative writings.

GCE O-Level Exam Format

| Paper | Duration | Marks | Weighting | Content |
|---|---|---|---|---|
| Paper 1 | 2 h | 60 | 30% | ● Functional Writing<br>● Composition |
| Paper 2 | 1 h 30 min | 70 | 35% | ● Language Usage<br>● Comprehension 1<br>● Comprehension 2 |
| Paper 3 | 15 min<br>30 min | 50<br>20 | 25%<br>10% | ● Oral Examination<br>● Listening Comprehension |

**Mathematics (Code:4048)**

The Mathematics syllabus aims to enable all students to:

- acquire mathematical concepts and skills for continuous learning in mathematics and to support learning in other subjects;
- develop thinking, reasoning, communication, application and metacognitive skills through a mathematical approach to problem solving;
- connect ideas within mathematics and between mathematics and other subjects through applications of mathematics;
- build confidence and foster interest in mathematics.

The concepts and skills covered in the syllabus are organised along 3 content strands: Number and Algebra, Geometry and Measurement, Statistics and Probability.

GCE O-Level Exam Format

| Paper | Duration | Marks | Weighting | No. of Questions |
|---|---|---|---|---|
| **Paper 1** | 2 h | 80 | 50% | Answer all questions, short structured questions, about 22 to 25 questions. |
| **Paper 2** | 2.5 | 100 | 50% | Answer all questions, 10 structured questions. |

**Express Science (Physics and Chemistry) (Code:5076)**

The Ordinary Level Science (Physics) Syllabus provides students with a coherent understanding of energy, matter, and their interrelationships. It focuses on investigating natural phenomena and then applying patterns, models (including mathematical ones), principles, theories and laws to explain the physical behaviour of the universe. The theories and concepts presented in this syllabus belong to a branch of physics commonly referred to as classical physics. Modern physics, developed to explain the quantum properties at the atomic and sub-atomic level, is built on knowledge of these classical theories and concepts

The syllabus is organised based on:

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

The Ordinary Level Science (Chemistry) syllabus is designed to place less emphasis on factual materials and greater emphasis on the understanding and application of scientific concepts and principles. This approach has been adapted in recognition of the need for students to develop skills that will be of long-term value in an increasingly technological world rather than focusing on large quantities of factual materials, which may have only short-term relevance.

The syllabus is organised based on:

- Experimental Chemistry
- Atomic Structure and Stoichiometry
- Chemistry of Reactions
- Periodicity
- Atmosphere
- Organic Chemistry

GCE O-Level Exam Format

| **Paper** | **Duration** | **Marks** | **Weighting** |
|---|---|---|---|
| Paper 1: MCQ | 1 h | 40 | 20.0% |
| Paper 2 (Physics): Structured and Free Response | 1 h 15 min | 65 | 32.5% |
| Paper 3 (Chemistry): Structured and Free Response | 1 h 15 min | 65 | 32.5% |
| Paper 5: Practical (Physics and Chemistry) | 1 h 30 min | 30 | 15.0% |

# GCE ‘N’ AND ‘O’ LEVEL GRADING SYSTEM

| GCE ‘NT’ Level | | GCE ‘NA’ Level | | GCE ‘O’ Level | |
|---|---|---|---|---|---|
| **Grades** | **Marks** | **Grades** | **Marks** | **Grades** | **Marks** |
| A | ≥75 | 1 | ≥75 | A1 | ≥75 |
| B | 70-74 | 2 | 70-74 | A2 | 70-74 |
| C | 60-69 | 3 | 65-69 | B3 | 65-69 |
| D | 50-59 | 4 | 60-64 | B4 | 60-64 |
| U | ≤49 | 5 | 50-59 | C5 | 55-59 |
| | | U | ≤49 | C6 | 50-54 |
| | | | | D7 | 45-49 |
| | | | | E8 | 40-44 |
| | | | | F9 | ≤39 |

# THE BONUS POINT SYSTEM FOR ADMISSION TO POST-SEC INSTITUTES

| SN | Types of Bonus Points | No. of Bonus Points Available | Maximum Bonus Points Allowable | |
|---|---|---|---|---|
| 1 | For students seeking admission to JC/MI/Polytechnic/ITE, with the following CCA attainments/grades:<br>a. Excellent, A1 – A2<br>b. Good, B3 – C6 | 2 points<br>1 point | Limited to a maximum of <u>4 Bonus Points</u> only for these 4 sections. | Limited to a maximum of <u>6 Bonus Points</u> only. |
| 2 | For students seeking admission to JC/MI courses:<br>a. HMTL Grade: A1 – C6 **AND**<br>b. EL Grade: A1 – C6 | 2 points | | |
| 3 | For students who choose NYJC course(s) as their:<br>a. 1st choice, **OR**<br>b. 1st and 2nd choices. | 2 points | | |
| 4 | For students seeking admission to JC/MI courses:<br>a. ML/CL Special Programme Grade: A1 – C6 **OR**<br>b. Bahasa Indonesia (as 3rd Lang) Grade: A1 – C6 | 2 points | | |
| 5 | For students who had applied for the CLEP, MLEP or TLEP and have been selected for the programme. | 2 points | | |

# POST-SECONDARY EDUCATION

## Normal Academic

| Education Routes | Details | Certification | Qualifying Criteria (based on GCE N-Level Exams) |
|---|---|---|---|
| Polytechnic Foundation Programme (PFP) | 1-Yr Foundation + 3-Yr Poly | Diploma | i. ELMAB3 (English, Mathematics, Best 3 Subjects) ≤12; **AND**<br>ii. Meet the subject-specific course requirements |
| Direct Polytechnic Programme (DPP) | 2-Yr Higher Nitec + 2-Yr Poly | Diploma | ELMAB3≤19 **AND**<br>Grp 1: EL ≤ 4,MA ≤ 4,any 3 other subjects≤5<br>Grp 2: EL ≤ 3,MA ≤ 4,any 3 other subjects≤5 |
| Sec 5N | 1 Year | GCE O-Level | ELMAB3≤19, **AND**<br>All 5 subjects≤5 |
| ITE | 2-Yr Nitec + 2-Yr/3-Yr Higher Nitec | Nitec/ Higher Nitec | 3 GCE 'N' passes, with pre-requisites for certain courses |

# FREQUENTLY ASKED QUESTIONS

1. What are the requirements for taking Coursework subjects such as Art, D&T and NFS?

   The Coursework examination for each subject requires students to work on a long term project which begins in January of the examination year. It requires students to have good time management skills and consistent effort throughout the year.

2. What are some considerations for my child, in selection of subjects?

   These are some factors to consider:

   - Interest in the subject – students tend to excel in the subjects they are interested in.
   - Competency in the subject – it's a good indication that students can cope with the subject at a higher level.
   - Understanding the demands of the subject:

   i. Art requires observational drawing skills;
   ii. D&T requires basic isometric drawing skills;
   iii. NFS requires baseline ICT skills in MS Word and MS PPT, and a good command of English.

3. Can my child take Chinese Language B (CLB) in Sec 3? If yes, does he/she need to travel to other school for the CLB Class?

   No, there is no provision for the child to take CLB in Sec 3. The application to switch from CL to CLB is only applicable in Sec 4, and managed on a case-to-case basis. There is no need for the child to travel to another school for the CLB lesson.

4. As POA is capped at a maximum of 1 class, and based on Math performance, how does the school compare the Math results of students taking NA Math and Express Math?

   To ensure that students who stretch themselves by taking up higher-level subjects are not disadvantaged, the school will adjust the marks obtained in the higher-level subject at the backend. For example, the school would add marks to the Maths score obtained by an N(A) student taking Maths at Express level, following the guidelines provided by MOE, before the selection starts.