

2023 Subject Booklets – G2

Additional Math N Level 4051

Art (NA level)

Chinese N Level 1196

Design & Technology (NA level)

Elective History NA

English Language - EL 1190

Geography Elective (2125 2)

Malay 1197 NA 2023

Math Syllabus A N Level 4045

NFS NA

Principles of Accounts Level 7086

**Science Physics Chemistry Biology N
Level 5105, 5107**

Tamil G2

Subject	Additional Mathematics
Subject Code	4051
Stream	Normal Academic

Introduction

The N-level Additional Mathematics syllabus aims to enable students 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.

Students will be solving problems in different contexts, including those in the sciences and engineering. These experiences give students the opportunities to apply the concepts and skills that they have learnt and to appreciate the value and power of mathematics.

Students will learn different functions, namely, linear, quadratic, exponential, logarithmic and trigonometric. These functions provide the building blocks for simple models. Students could be exposed to the following applications and contexts.

- Motion of projectile (quadratic functions and calculus)
- Optimisation problems e.g. maximising profits, minimising costs (functions and calculus)
- Financial mathematics e.g. profit and cost analysis, marginal profit (functions and calculus)
- Tidal waves, hours of daylight, simple harmonic motion (trigonometric functions)

The list above is by no means exhaustive or exclusive. Students are not required to have in-depth knowledge of these applications and contexts. Problems involving these contexts will provide sufficient information for students to formulate and solve the problems, applying the relevant concepts and skills and interpret the solution in the context of the problem.

Through the process of solving such problems, students will experience all or part of the mathematical modelling process. This includes :

- formulating the problem, including making suitable assumptions and simplifications;

- making sense of and discussing data, including real data presented as graphs and tables;
- selecting and applying the appropriate concepts and skills to solve the problem; and interpreting the mathematical solutions in the context of the problem.

Scheme of Assessment

Sec 3 NA Additional Math (New Syllabus 4051) Papers

PAPER	DURATIO N	DESCRIPTION	MARKS	WEIGHTING
Paper 1	1h 45 min	There will be 13–15 questions of varying marks and lengths. Candidates are required to answer ALL questions.	70	100%

Sec 4 NA Additional Math (New Syllabus 4051) Papers

PAPER	DURATIO N	DESCRIPTION	MARKS	WEIGHTING
Paper 1	1h 45 min	There will be 13–15 questions of varying marks and lengths. Candidates are required to answer ALL questions.	70	50%
Paper 2	1h 45 min	There will be 8–10 questions of varying marks and lengths. Candidates are required to answer ALL questions.	70	50%

Subject Content

The concepts and skills covered in the A Math syllabus are organised along 3 content strands. The development of processes, metacognition and attitudes are embedded

in the learning experiences that are associated with the content.

Concept and Skills		
Algebra	Geometry and Trigonometry	Calculus
Learning Experiences (Processes, Metacognition and Attitudes)		

Additional Information

-

Entry Requirement

Students should have a strong interest in Maths and must be offered O Level Math before they can do N(A) A Math.

Algebra concepts in lower secondary must be good and students should score at least 50% overall for OOS subject or 70% or more for N(A) Maths in Sec 2

Subject	Art
Subject Code	6125
Stream	Normal Academic

Introduction

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. Visual literacy skills such as perceiving and responding to visual images, and analysis of visual information in its many forms are also developed.

Subject Content (Learning Outcomes)

The learning outcomes for the Art syllabus are organised under the domains of **PERCEIVING**, **COMMUNICATING** and **APPRECIATING**.

PERCEIVING	COMMUNICATING	APPRECIATING
<ul style="list-style-type: none"> • record from observation and experience • identify and define problems, issues and themes in visual expressions 	<ul style="list-style-type: none"> • conceptualise and translate ideas into artworks • apply art elements and design principles in the creation of artworks • explore creative use of materials, techniques and technologies to generate ideas and solutions to problems • acquire competence in manipulating art media towards the expression of an idea • communicate with relevant vocabulary the processes involved in art making 	<ul style="list-style-type: none"> • enjoy experiences of art making • achieve a sense of confidence and self-esteem through the visual arts • make connections between visual expressions and personal experiences • critically appraise artists and artworks • value local artworks as part of the development of Singapore's history and cultural heritage • develop an inquiring attitude and lifelong interest in the visual arts

Examination Requirements

Students taking the GCE N(A)-Level Art Syllabus Examinations will be required to offer:

Paper 1: Coursework (60%)

One Coursework unit comprising the finished artwork and not more than **five** A2 sheets of preparatory studies. Candidates are to include explorations of artists/artworks relevant to the chosen theme/media in their preparatory studies. The question paper will be issued to the candidates in the month of January of the examination year. Six themes will be issued and candidates are to make response to **one** of the themes.

Paper 2: Drawing and Painting (40%)

Paper to be given three weeks before the commencement of the N(A)-Level Examination. *Six* themes will be issued and candidates are to make response to **one** of the themes on paper of size A3 or A2. Preparatory studies of **three to five A3** sheets of paper must be submitted.

Scheme of Assessment

Paper 1: Coursework

The five assessment domains applied to the Coursework paper are:

- 1. Gathering and Investigation of Information (15%)**
- 2. Exploration and Development of Ideas/Concepts (15%)**
- 3. Aesthetic Qualities (25%)**
- 4. Selection and Control of Materials and Technical Processes (25%)**
- 5. Personal Response (20%)**

Paper 2: Drawing and Painting

The five assessment domains applied to the Drawing and Painting paper are:

- 1. Investigation and Interpretation of Theme (15%)**
- 2. Exploration and Development of Theme (15%)**
- 3. Aesthetic Qualities (25%)**
- 4. Control of Materials and Technical Processes (25%)**
- 5. Personal Response (20%)**

Entry Requirement

1. At least a 60% pass in Art at Secondary Two

Subject	Chinese 华文			
Subject Code	1196			
Stream	Normal Academic			
Introduction				
<p>1. 中学华文（普通学术）课程旨在小学课程的基础上，进一步提高聆听、说话、阅读、写作、口语互动和书面互动六个方面的知识。完成课程后，学生能够：</p> <ul style="list-style-type: none"> • 听懂适合程度的话语信息和内容，例如：故事、对话、诗歌、广告、报告、访问、广播剧、演讲、新闻报道、电台节目等。 • 根据情境与要求，清楚流利地讲述见闻，介绍日常事物。 • 针对话题发表感受或看法。 • 理解与分析适合程度的阅读语料，例如：故事、寓言、小说、散文、说明书、书信、海报、广告、传单、杂志、报章等。 • 根据情境与要求，清楚通顺地记叙见闻，介绍事物，针对话题表达感受或看法。 • 根据目的、情境和对象与他人进行口语互动和书面互动，交流情感、传达信息、表达看法。 <p>2. 本科试卷主要考查学生下列语文能力：</p> <ul style="list-style-type: none"> • 聆听 • 会话 • 词语的认识和语言的应用 • 阅读理解 • 写作简单的实用文 				
Scheme of Assessment				
Paper	Description	Marks	Weighting (%)	Duration
1	写作	60	30	2 h
2	语文理解与应用	60	30	1 h 30 min
3	口试	60	30	15 min
3	听力	20	10	30 min
Subject Content				
<p>1. 试卷一：写作</p> <p>这份试卷包括实用文和作文两部分。考生在写作时，可以使用考评局规定的词典。</p> <p>第一部分：实用文 考生可以从两道试题中任选一题，字数在 120 以上。考生可以根据所提供的电子邮件内容写一个回复电邮，或者根据所提供的材料，写一个电邮。</p> <p>第二部分：作文 考生可以从三道试题中任选一题，字数在 240 以上。考查的文体包括记叙文、说明文和议论文。</p>				

2. 试卷二：语文应用与阅读理解

这份试卷考查的项目包括：综合填空、阅读理解（一）和阅读理解（二），共有 28 道题目。

第一部分：综合填空

考生根据所提供的短文内容和上下文的意思，选出最适当的答案。

第二部分：阅读理解（一）

考生根据所提供的 3 至 4 个实用性语料或短文的内容，选出最适当的答案。考查的内容包括广告、传单、新闻报道等。

第三部分：阅读理解（二）

考生根据所提供的 2 至 3 个短文的内容回答问题。

3. 试卷三：口试

这份试卷包括朗读短文和会话。在考试前，考生有 10 分钟的时间默读短文和观看录像短片。考生在限定的时间内，可以多次默读短文和观看录像短片。

第一部分：朗读短文

考生必须朗读一个短文。

第二部分：会话

考生针对所提供的录像短片，以及主考员的提问，跟主考员进行一段对话。

4. 试卷三：听力理解

这份试卷包括三个简短对话或语段，以及三个理解篇章，共有 10 道选择题。考生先听录音，然后回答问题。考查的内容包括日常会话、广告、说明、故事和新闻报道等。

Additional Information

NA

Entry Requirement

NA

Subject	Design & Technology
Subject Code	7055
Stream	Normal Academic

Introduction

The Design & Technology (D&T) curriculum 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.

Scheme of Assessment

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	
1 Written Paper	1 hour 30 minutes	25%	10%	5%	40%
2 Design Project	20 weeks	15%	20%	25%	60%
Overall		40%	30%	30%	100%

Subject Content

Section 1 (Design) and Section 2 (Technology) in the syllabus document define a content baseline for Centres to provide designing and prototyping opportunities via the Design Process for candidates to:

- develop design-related dispositions
- acquire design techniques and strategies
- consolidate a sound working knowledge of technology (materials, workshop processes, structures, mechanisms and electronics).

Designing is concerned with creating change to affect empathy, practicality and appropriateness in everyday life. As a way of thinking and doing, it focuses on creating solutions using appropriate technology with purposeful intent. This broadly involves rational thought processes and intuitive responses that are nested within a holistic fabric of analytical, creative and critical thinking. Essential to designing is the ability to imagine and model using doodles/sketches/drawings and mock-ups. These means of modelling ideas also trigger and inform thought processes for experimenting and testing the feasibility of solutions and to help in decision making. Upon thorough and thoughtful development of the idea, the proposed design solution is realised through prototyping. This involves working with suitable resistant materials using workshop processes, and practical application of knowledge in structures, mechanisms and/or electronics. During Prototyping, evaluation and refinement of the proposed design solution should not be ruled out with the aim of achieving a practical and appropriate solution for the identified user.

Examination

Paper 1	Written Examination (1 hour 30 minutes) [40% of the total mark for the subject]
----------------	---

Candidates are to answer all questions. The questions will be design-centric. Question 1 requires knowledge application of Section 1 Design. Question 2 to Question 4 require knowledge application of Section 2 Technology; specifically mechanisms and electronics. The mark allocation is:

Question 1	24 out of 60 marks
Question 2 and 3	36 out of 60 marks

Paper 2	Design Project (20 weeks) [60% of the total mark for the subject]
----------------	---

The Design Project is an **individual coursework-based** examination. The examination will be conducted over 20 weeks from the question paper release, excluding school holidays. Candidates will be required to work on a design and prototyping project based on the examination question.

The Design Project will comprise two components: The Design Journal and Presentation Board. The Design Journal is a real-time document that reflects the candidate's attempt at managing his or her personal design process.

Additional Information

- D&T is a relevant subject under ELMAB3 for application to Polytechnic Foundation Programme (PFP) courses featured in Group 1.
- Students may be offered a more demanding D&T syllabus 7059 at O level depending on their aptitude and grades for D&T and all other subjects at Secondary Three, subject to teacher's recommendation.
- Secondary Four Normal (Academic) students who have sat for D&T syllabus 7059 at O level are allowed to combine their N and O level examination results to compute their eligibility to the Polytechnic Foundation Programme (PFP) courses featured in Group 1.
- Students typically proceed to take a more demanding D&T syllabus 7059 at O level during Secondary Five after completing D&T syllabus 7055 at Secondary Four.

Entry Requirement

1. At least a pass in Design & Technology at Secondary Two

Demands of the Syllabus

1. Ability to do basic sketching and idea conceptualisation, make mock-up(s) and prototype
2. Ability to conduct internet search for research, organisation of data, and use Google Apps for coursework
3. Be self-directed and have good time management and perseverance as coursework requires consistent effort in research, self-study and experimentation
4. Have the desire to innovate
5. Like to work with their hands

Subject	Elective History (G3)
Subject Code	2126/02
Stream	G3
Introduction	
<p>In the History classroom, lessons are conducted with the goal of ensuring that students are empowered to draw connections between the past and present by understanding how the nature and impact of past developments explain today's world.</p> <p>Why does History matter?</p> <p>The study of History aims to develop students that are:</p> <ol style="list-style-type: none"> 1. Enquiring Develops an inquisitive mind by asking useful questions for uncovering and understanding the past. 2. Balanced Considers and acknowledges different viewpoints when constructing own historical interpretation. 3. Knowledgeable Develops a sound awareness of and familiarity with key forces and personalities that have shaped the international and regional landscapes. 4. Empathetic Understands the reasons behind past developments without imposing judgement using present day norms. 5. Methodical Employs comprehensive effort when engaged in historical enquiry by covering a range of sources, selecting and organising knowledge effectively. 6. Reasoned Constructs historical interpretation based on substantiated arguments. <p>These are qualities that are essential to help students confront an increasingly ambiguous and complex world.</p>	
Scheme of Assessment	
<p>The examination consists of one paper and the duration of the paper is 1 hour 40 minutes. The assessment modes comprise source-based case study and structured-essay questions.</p>	

The Making of the 20 th Century Modern World, 1910s–1991	
<p>Section A: Source-Based Case Study (30%)</p> <ul style="list-style-type: none"> • Maximum of 5 sources • Q1a-e: source-based questions (AO1+AO3) 	30m
<p>Section B: Essay Questions (20%)</p> <ul style="list-style-type: none"> • Answer 2 out of 3 questions set (AO1+AO2) • The questions require candidates to analyse and explain historical events and / or issues • Each question carries 10 marks 	20m
Total marks for Paper	50m

Subject Content

Unit 1 –The World in Crisis What forces and developments changed Europe and the Asia-Pacific in the first half of the 20th century?

- After World War I
- Rise of authoritarian regimes and its impact in the interwar years
 - *Case study of Nazi Germany
- World War II in Europe and the Asia–Pacific
 - *Outbreak of World War II in Europe
 - Outbreak of World War II in the Asia–Pacific

Unit 2 – Bi-Polarity and the Cold War How did the Cold War impact the world order in the post-1945 years?

- *Origins of the Cold War
- Manifestation of the Cold War outside Europe
 - Case study of Vietnam War, 1954–1975
- End of Cold War

Source based studies will only be set on the case studies indicated by the symbol [*].

Entry Requirement

Students who wish to take Elective History should have an interest in the subject and students should score 50% and above for History at the Lower Secondary level.

Subject	English Language
Subject Code	1190
Stream	Normal (Academic)

Introduction

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

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

Scheme of Assessment

Paper	Description	Marks	Weighting (%)	Duration
1	Writing	70	35	1 h 50 min
2	Comprehension	50	35	1 h 50 min
3	Listening	30	10	45 min
4	Oral Communication	30	20	20 min

Subject Content

Paper 1 Writing

Section A:

Editing - Candidates identify and edit grammatical errors in a short written text.

Section B:

Situational Writing -Candidates write 180–250 words on a given situation which will involve viewing a visual text.

Section C:

Continuous Writing - Candidates write 250–400 words on one of four topics set.

Paper 2 Comprehension

Section A:

Candidates respond to questions based on Texts 1 and 2, one of which is a visual text.

Section B:

Candidates respond to a variety of questions based on Text 3 which is a narrative or a recount.

Section C:

Candidates respond to a variety of questions based on Text 4, a non-narrative text, and write an 80-word response to a summary writing task.

Paper 3 Listening

Section A:

Candidates respond to a variety of listening tasks based on a number of audio recordings which the candidates will hear twice.

Section B: Candidates listen to an audio recording and do a simple note-taking exercise. Candidates will hear the recording only once.

Paper 4 Oral Communication

The two parts in this paper may be thematically linked.

Part 1: Planned Response

Candidates plan and deliver a response to a video clip and accompanying prompt presented on a computer screen.

Part 2: Spoken Interaction

Candidates engage in a discussion with the Examiners on a topic based on the same video clip.

Additional Information

Students are encouraged to read widely on a range of topics to familiarise themselves with current affairs and to experience good writing. They should also build up their store of vocabulary and appropriate expressions, in order to communicate effectively in both speaking and writing.

Entry Requirement

NA

Subject	Geography Elective
Subject Code	2125/02
Stream	Normal Academic
Introduction	
<p>The Upper Secondary Geography syllabus is aligned to the Framework for 21st Century Competencies (21CC) and Student Outcomes, and it enables students to develop competencies necessary for them to thrive in a globalised and fast-changing world. Learning Geography supports the acquisition of the 21CC through inquiries, developing well-constructed explanations and responses to phenomena or issues affecting their everyday lives. Geography also introduces investigative and communication tools including maps, fieldwork and Geographic Information Systems (GIS), which offer unique opportunities to make sense of the modern world. Geography students 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.</p>	

Scheme of Assessment

2125 N(A)-Level Humanities (Geography)

Duration:
1hr 45 mins

Candidates answer **Question 1, and either Question 2 or 3** based on the Cluster studied:

Total Marks: **50**

- Question 1: Geography in Everyday Life (25m)

Weighting: 50%

EITHER

- Question 2: Climate (25m)

OR

- Question 3: Tectonics (25m)

Each structured question will consist of **no more than 12 sub-parts**.

Candidates will be required to answer one 6 marks question testing on AO3 in Question 2/Question 3. This AO3 question carrying 6 marks will be marked using a generic holistic rubric. All other questions in this paper will be marked using point marking.

Subject Content

Content Overview

This syllabus is divided into **three** clusters of topics.

Geography in Everyday Life Cluster

- Topic 1 – Thinking Geographically
- Topic 2 – Sustainable Development
- Topic 3 – Geographical Methods

EITHER

Climate Cluster

- Topic 1 – Weather and Climate
- Topic 2 – Climate Change
- Topic 3 – Climate Action

OR

Tectonics Cluster

- Topic 1 – Plate Tectonics
- Topic 2 – Earthquakes and Volcanoes
- Topic 3 – Disaster Risk Management

Assessment Specification Grid

The table below shows the approximate weighting of the AOs in the syllabus.

Assessment Objectives	Weightings for Paper 1 and Paper 2 each
AO1: Knowledge with Understanding	20%
AO2: Skills and Analysis	20%
AO3: Judgement and Decision-making	10%
Total	50%

Additional Information

Nil

Entry Requirement

Minimum a pass in Sec 2 Geography

Subject	Bahasa Melayu
Subject Code	1197
Stream	Normal Akademik

Introduction

Berdasarkan Sukatan Pengajaran dan Pembelajaran Bahasa Melayu (Sekolah Menengah) 2021 yang dihasilkan oleh Bahagian Perancangan dan Pembangunan Kurikulum, Kementerian Pendidikan, pada akhir pendidikan sekolah menengah kursus Bahasa Melayu GCE Peringkat Normal (Akademik), pelajar harus berupaya untuk:

- (a) mendengar pelbagai teks lisan (sama ada dengan penyertaan keupayaan melihat atau sebaliknya) untuk memberikan respons berdasarkan konteks, tujuan dan khalayak;
- (b) bertutur dengan fasih sesuai dengan konteks, tujuan dan khalayak;
- (c) berinteraksi secara lisan dengan jelas, lancar dan berkesan sesuai dengan konteks, tujuan dan khalayak;
- (d) membaca pelbagai teks (sama ada dengan penyertaan keupayaan melihat atau sebaliknya) untuk memberikan respons yang sesuai berdasarkan tujuan, situasi dan khalayak;
- (e) menulis pelbagai teks dengan jelas dan berkesan sesuai dengan konteks, tujuan dan khalayak (menggunakan kosa kata yang sesuai, bahasa yang gramatis dan gaya bahasa yang betul); dan
- (f) berinteraksi melalui penulisan (sama ada dengan penyertaan keupayaan melihat atau sebaliknya) dengan jelas dan berkesan untuk memberikan respons yang sesuai mengikut konteks, tujuan dan khalayak.

Scheme of Assessment

Paper	Description	Marks	Weighting (%)	Duration
1	Paper 1 (Functional & Essay Writing)	60	30	2 h 00 min
2	Paper 2 (Language & Comprehension)	60	30	1 h 30 min
3	Paper 3 (Oral)	60	30	15 min
	Listening Comprehension	20	10	30 min

Subject Content

Kertas 1: Penulisan Fungsional dan Karangan (60 markah)

Kertas 1 terbahagi kepada dua bahagian; Bahagian A dan Bahagian B. Calon dikehendaki menjawab dua soalan; satu daripada Bahagian A dan satu lagi daripada Bahagian B. Masa yang diperuntukkan ialah dua jam. Kamus yang diluluskan boleh digunakan.

Bahagian A: Penulisan Fungsional (20 markah)

Bahagian A mengandungi dua soalan. Calon perlu menjawab satu daripada dua soalan yang dikemukakan. Panjangnya respons calon haruslah sekurang-kurangnya 100 patah perkataan.

- Forum/blog (Konteks tidak formal) Calon dikehendaki menulis respons peribadi berupa hantaran secara dalam talian berdasarkan maklumat yang diberikan dalam bentuk forum atau blog.
- E-mel (Konteks formal) Calon dikehendaki menulis respons berdasarkan maklumat yang diberikan dalam bentuk e-mel. Sebagai contoh, untuk memberikan pujian, melaporkan insiden, membuat aduan dan lain-lain lagi.

Bahagian B: Penulisan Karangan (40 markah)

Bahagian B mengandungi tiga soalan. Calon perlu menjawab satu sahaja. Panjangnya karangan calon haruslah sekurang-kurangnya 200 patah perkataan.

Kertas 2: Penggunaan Bahasa dan Kefahaman (60 markah)

Kertas 2 terbahagi kepada tiga bahagian: Bahagian A, B dan C. Calon dikehendaki menjawab semua soalan. Masa yang diperuntukkan ialah 1 jam 30 minit.

Bahagian A: Penggunaan Bahasa (10 markah)

Bahagian ini mengandungi 10 soalan berbentuk aneka pilihan (MCQ). Calon dikehendaki memilih perkataan yang tepat daripada golongan Kata Nama, Kata Kerja, Kata Adjektif atau Kata Tugas untuk melengkapkan dua teks ekspositori yang diberikan.

Bahagian B: Kefahaman 1 (20 markah)

Soalan B1 (10 markah)

Bahagian ini mengandungi lima soalan berbentuk aneka pilihan (MCQ). Calon dikehendaki melengkapkan dialog dengan frasa yang paling sesuai mengikut konteks yang disediakan.

Soalan B2 (10 markah)

Bahagian ini mengandungi lima soalan kefahaman berbentuk aneka pilihan (MCQ). Calon dikehendaki menjawab soalan berdasarkan dua teks autentik seperti iklan, brosur, poster, risalah, rencana dan lain-lain lagi.

Bahagian C: Kefahaman 2 (30 markah)

Bahagian ini mengandungi lapan soalan berbentuk respons bebas berdasarkan satu teks naratif. Calon dikehendaki menjawab enam soalan kefahaman. Bagi soalan kosa kata, terdapat dua kosa kata yang diuji. Calon dikehendaki mengenal pasti perkataan yang terdapat dalam teks yang mempunyai maksud yang sama dengan frasa yang diberikan bagi soalan kosa kata yang pertama dan memberikan maksud perkataan/frasa mengikut konteks yang diberikan bagi soalan kosa kata yang kedua.

Kertas 3: Lisan dan Kefahaman Mendengar (80 markah)

Kertas 3 mengandungi dua komponen.

Lisan (60 markah)

Peperiksaan Lisan terdiri daripada dua bahagian. Masa yang diperuntukkan adalah lebih kurang 15 minit. Calon diberi 10 minit untuk membuat persiapan.

Bahagian A: Bacaan Lantang (20 markah)

Calon dikehendaki membaca dengan lantang teks yang dipaparkan pada skrin komputer.

Bahagian B: Perbualan (40 markah)

Calon dikehendaki menonton klip video (55-60 saat) dan melibatkan diri dalam perbualan dengan pemeriksa lisan berdasarkan topik yang berkaitan dengan tema klip video yang telah ditonton.

Kefahaman Mendengar (20 markah)

Bahagian ini mengandungi 10 soalan berbentuk aneka pilihan (MCQ). Calon dikehendaki menjawab soalan berdasarkan enam teks autentik pelbagai genre seperti rencana, iklan, pengumuman, cerpen

dan lain-lain lagi. Tiga daripada teks tersebut merupakan teks pendek (satu soalan bagi setiap teks pendek). Masa yang diperuntukkan adalah lebih kurang 30 minit.

Additional Information

NA

Entry Requirement

NA

Subject	Mathematics Syllabus A
Subject Code	4045
Stream	Normal Academic

Introduction

The N-Level Mathematics syllabus aims to enable 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; and
- build confidence and foster interest in mathematics.

Students will be solving problems in real-world contexts as part of the learning experiences of every student. These experiences give students the opportunities to apply the concepts and skills that they have learnt and to appreciate the value of and develop an interest in mathematics. Problems in real-world contexts can be included in every strand and level, and may require concepts and skills from more than one strand.

Students are expected to be familiar with the following contexts and solve problems based on these contexts over the four years of their secondary education:

- In everyday life, including travel/excursion plans, transport schedules, sports and games, recipes, floor plans, navigation etc.
- In personal and household finance, including simple and compound interest, taxation, instalments, utilities bills, money exchange, etc.
- In interpreting and analysing data from tables and graphs, including distance-time and speed-time graphs. The list above is by no means exhaustive or exclusive.

Through the process of solving such problems, students will experience all or part of the mathematical modelling process.

This includes:

- formulating the problem, including making suitable assumptions and simplifications;

- making sense of and discussing data, including real data presented as graphs and tables;
- selecting and applying the appropriate concepts and skills to solve the problem; and
- interpreting the mathematical solutions in the context of the problem.

Scheme of Assessment

N(A)-Level Mathematics (First Year of Examination – 2023)

PAPER	DURATION	DESCRIPTION	MARKS	WEIGHTING
Paper 1	2h	There will be 13–15 questions of varying marks and lengths. Candidates are required to answer ALL questions.	70	50%
Paper 2	2h	There will be 2 sections: <ul style="list-style-type: none"> • Section A will contain 9 to 10 questions of varying lengths. The last question in this section will focus specifically on applying mathematics to a real-world scenario. Candidates are required to answer all questions. • Section B will contain 2 questions of which candidates will be required to answer only one. <ul style="list-style-type: none"> • The questions in Section B will be based on the underlined content and there will be one question from the 'Geometry and Measurement' strand and one from the 'Statistics and Probability' strand. • Each question carries the same number of marks, that is, either 7 or 8 marks. 	70	50%

Subject Content

The concepts and skills covered in the syllabus are organised along 3 content strands. The development of processes, metacognition and attitudes are embedded

in the learning experiences that are associated with the content.

Concept and Skills		
Number and Algebra	Geometry and Measurement	Statistics and Probability
Learning Experiences (Processes, Metacognition and Attitudes)		

Additional Information

--Students who have attained distinction in Math may be offered O-Level Mathematics in 3N1.

Entry Requirement

-

Subject	Nutrition and Food Science			
Subject Code	6073			
Stream	Normal Academic			
Introduction				
The Nutrition and Food Science (NFS) curriculum is designed to engage 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.				
Scheme of Assessment				
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	Assessment Objectives			Total
	AOA Knowledge with understanding	AOB Handling information and solving problems	AOC Application of skills, knowledge and understanding in a variety of contexts	
1 (Written paper)	~ 25%	~ 15%	N.A.	40%
2 (Coursework)	~ 10%	~ 10%	~ 40%	60%
Overall	35%	25%	40%	100%
Subject Content				
In the syllabus document, a content baseline is provided for candidates, specifically in: <ul style="list-style-type: none"> • Nutrition and Health (Nutrients, Water, and Dietary Fibre, Diet and Health Problems), • Food Literacy (Food Management, Smart Consumer), • Food Science (The Science of Food Preparation and Cooking, Reactions in Food during Preparation and Cooking, Evaluation of Food). 				
Examination				

Paper 1	Written Examination (1.5 hours) [40% of the total mark for the subject]
Candidates are to answer all questions. The questions will test the candidates' knowledge of theory and practice in response to the assessment objectives. The mark allocation is:	
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)
Sub-total	80 marks
Paper 2	Coursework (25 hours of curriculum time) [60% of the total mark for the subject]
Candidates will be given an assignment at the beginning of the examination year which must be conducted under teacher supervision. It should be completed for assessment by the end of July or early August of the examination year. The assignment requires a problem-solving and investigative approach, with an emphasis on investigation work. A total of 25 hours of curriculum time must be assigned to discuss, facilitate, and carry out the investigation and practical work as required.	
Assessment will focus on the research of the 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. The evaluation will require candidates to conduct sensory evaluation of the dishes prepared and the outcomes of the execution process.	
The coursework report must be word processed and submitted electronically. Digital photographic evidence of the Investigation and the final dishes in the Execution criteria must be included in the report. The page requirement of the report is between 15–20 pages .	
Additional Information	
<ul style="list-style-type: none"> • NFS is a relevant subject under ELMAB3 for application to Polytechnic Foundation Programme (PFP) courses featured in Group 1. • Students may be offered a more demanding NFS syllabus 6097 at O level depending on their aptitude and grades for NFS and all other subjects at Secondary Three, subject to teacher's recommendation. • Secondary Four Normal (Academic) students who have sat for NFS syllabus 6097 at O level are allowed to combine their N and O level examination results to compute their eligibility to the Polytechnic Foundation Programme (PFP) courses featured in Group 1. • Students typically proceed to take a more demanding NFS syllabus 6097 at O level during Secondary Five after completing NFS syllabus 6073 at Secondary Four. 	
Entry Requirement	
1. At least a pass in Food and Consumer Education at Secondary Two	
Demands of the Syllabus	
<ol style="list-style-type: none"> 1. Ability to conduct internet search for research, organisation of data, and use Google Apps for coursework 2. Exhibit basic culinary skills 3. Be self-directed and have good time management and perseverance as coursework requires consistent effort in research, self-study and experimentation 4. Have the desire to innovate 5. Like to work with their hands 	

Subject	Principles of Accounts
Subject Code	7086
Stream	Normal Academic

Introduction

The primary aim of the Principles of Accounts syllabus is 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.

Students need to understand the purpose of the information and how business activities are measured and represented before becoming users of accounting information. Hence, the syllabus aims to first equip students with the basic knowledge and skills on how to prepare and present accounting information and communicate them in a useful manner that can be understood by others.

The syllabus then aims to help students to become users of accounting information and make informed decisions using both accounting and non-accounting business-related information. By learning to become users of information, students understand:

- what business decisions are
- how decisions are made using accounting information
- the limitations of relying only on accounting information; and
- the consideration of non-accounting business-related information.

Scheme of Assessment

There are *two compulsory papers*.

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

Subject Content

Accounting and its role in Stakeholders' Decision-making Process

- 1.1. Roles of accounting and accountants
- 1.2 Stakeholders and their decision-making needs

Businesses

- 2.1 Types of businesses

Measurement and Presentation of Business Activities

2.3 Elements of Financial Statements

2.4 Accounting Equation

2.5 Financial statements

2.6 Income and Expenses

2.7 Assets

2.8 Liabilities

2.9 Equities

Correction of Errors

2.10 Correction of errors

Accounting Assumptions and Principles

3.1 Accounting theories

Accounting Information System and Accounting Cycle

3.2 Accounting information system and accounting cycle

3.3 Understanding double-entry recording system

3.4 Internal controls

Entry Requirement

Students should have a strong interest in accounting and business.

Students should score at least 65% for overall, mathematics and English.

Subject	Science: Physics, Chemistry Science: Chemistry, Biology
Subject Code	5105 Science: Physics, Chemistry 5107 Science: Chemistry, Biology
Stream	Normal Academic

Introduction

Sci Chemistry (5105, 5107)

The disciplinary ideas of Chemistry described below represent the overarching ideas which can be applied to explain, analyse and solve a variety of problems that seek to address the broader questions of what matter is and how particles interact with one another. Equipping students with a coherent view and conceptual framework facilitates the application and transfer of learning.

These disciplinary ideas can be revisited and deepened at higher levels of learning and beyond the schooling years.

1. Matter is made up of a variety of chemical elements, each with characteristic properties, and the smallest particle that characterises a chemical element is an atom.
2. The structure of matter and its chemical and physical properties are determined by the arrangement of particles and electrostatic interactions between them.
3. Energy changes across and within systems usually occur during physical and chemical changes, when there is rearrangement of particles.
4. Energy plays a key role in influencing the rate and extent of physical and chemical changes.
5. Matter and energy are conserved in all physical and chemical changes.

Sci Physics (5105)

The disciplinary ideas of Physics represent the overarching ideas essential for the understanding of Physics. An understanding of these ideas helps students see the interconnectedness of ideas within and across the sub-disciplines of Physics. Equipping students with a coherent view and conceptual framework facilitates the application and transfer of learning. These disciplinary ideas can be revisited and deepened at higher levels of learning and beyond the schooling years.

Disciplinary ideas are introduced at the upper secondary levels when students begin to specialise in the sub-disciplines of science.

1. Matter and energy make up the Universe
2. Matter interacts through forces and fields
3. Forces help us understand motion
4. Waves can transfer energy without transferring matter
5. Conservation laws constrain the changes in systems
6. Microscopic models can explain macroscopic phenomena

Sci Biology (5017)

The disciplinary ideas of Biology described below represent the overarching ideas which can be applied to explain, analyse and solve a variety of problems that seek to address the broader question of how living organisms work to sustain life. The purpose of equipping students with an understanding of these ideas is to develop in them a coherent view and conceptual framework of scientific knowledge to facilitate the application and transfer of learning.

These ideas can be revisited throughout the syllabus, deepened at higher levels of learning and beyond the schooling years.

1. The Cell – Diverse life forms are similar in that their basic unit are cells.

2. Structure and Function – Structure and function of organisms from the molecular to the organ system levels are related to each other.
3. Systems – Biological systems interact among themselves and with the environment resulting in the flow of energy and nutrients.
4. Energy – To ensure survival, living organisms obtain, transform and utilise energy from the external world.
5. Homeostasis, Co-ordination and Response – Living organisms detect changes both from the surrounding environment and within themselves so that they are able to respond to these changes to maintain a constant internal environment needed for sustaining life.
6. Evolution – The diversity of living organisms is achieved through a process of evolution, driven by mechanisms such as natural selection.

Scheme of Assessment

There will be six papers of which candidates will take four as described below.

- 5105 Science (Physics, Chemistry) Papers 1, 2, 3, 4
 5106 Science (Physics, Biology) Papers 1, 2, 5, 6
 5107 Science (Chemistry, Biology) Papers 3, 4, 5, 6

The pair of Papers 1 and 2, 3 and 4, 5 and 6 will be taken in one session of 1 hour 15 minutes. Candidates will be advised not to spend more than 30 minutes on each of Papers 1, 3 and 5.

Paper	Type of Paper	Duration	Marks	Weighting
1	Multiple Choice (Physics)	1 hour 15 minutes	20	20%
2	Structured (Physics)		30	30%
3	Multiple Choice (Chemistry)	1 hour 15 minutes	20	20%
4	Structured (Chemistry)		30	30%
5	Multiple Choice (Biology)	1 hour 15 minutes	20	20%
6	Structured (Biology)		30	30%

Subject Content

Sci Physics

SECTION	Topics
I. Measurement	1. Physical Quantities, Units and Measurement
II. Newtonian Mechanics	2. Kinematics 3. Force and Pressure 4. Dynamics 5. Energy
III. Thermal Physics	6. Kinetic Particle Model of Matter 7. Thermal Processes
IV. Waves	8. General Wave Properties 9. Electromagnetic Spectrum
V. Electricity and Magnetism	10. Electric Charge and Current of Electricity 11. D.C. Circuits 12. Practical Electricity
VI. Radioactivity	13. Radioactivity

Sci Chemistry

SECTION	Topics
I. Matter – Structures and Properties	1. Experimental Chemistry 2. The Particulate Nature of Matter 3. Chemical Bonding and Structure
II. Chemical Reactions	4. Chemical Calculations 5. Acid-Base Chemistry 6. Qualitative Analysis 7. Patterns in the Periodic Table
III. Chemistry in a Sustainable World	8. Organic Chemistry 9. Maintaining Air Quality

Sci Biology

SECTION	Topics
I. Cells and the Chemistry of Life	1. Cell Structure and Organisation 2. Movement of Substances 3. Biological Molecules
II. The Human Body – Maintaining Life	4. Nutrition in Humans 5. Transport in Humans 6. Respiration in Humans 7. Infectious Diseases in Humans
III. Living Together – Plants and Animals	8. Nutrition and Transport in Flowering Plants

Entry Requirement

NA

Subject	Tamil
Subject Code	1198
Stream	Normal Academic (G2)

Introduction

கல்வி அமைச்சின் பாடக்கலைத்திட்ட வரைவு, மேம்பாட்டுப் பிரிவினால் உருவாக்கப்பட்ட உயர்நிலை வகுப்புகளுக்கான தமிழ்மொழிப் பாடத்திட்டத்தின் முக்கிய நோக்கம் கேட்டல், பேசுதல், படித்தல், எழுதுதல் ஆகிய நான்கு அடிப்படை மொழித்திறன்களோடு இருவழிக் கருத்துப்பரிமாற்றத் திறன்களிலும் மாணவர்களுக்குப் பயிற்சியளித்தலாகும். இவற்றோடு தமிழ் மரபுக் கூறுகளையும் பண்பாட்டுக் கூறுகளையும் மாணவர்களுக்கு நன்கு விளக்குவதோடு நாட்டுருவாக்கத்துக்குத் தேவையான பண்புநலன்களையும் அவர்களிடத்தில் வளர்த்தலாகும். எனவே, உயர்நிலை வகுப்புகளுக்குரிய தமிழ்மொழிப் பாடத்திட்டம் பின்வரும் கற்றல் அடைவுநிலைகளை அடிப்படையாகக்கொண்டு வடிவமைக்கப்பட்டுள்ளது:

கேட்டலும் நோக்கலும்:

மாணவர்கள் பல்வகையான கேட்டல் நோக்கல் வளங்களைக் கேட்டும் பார்த்தும் தக்க வகையில் புரிந்துணர்வை வெளிப்படுத்துவர்.

பேசுதல்:

மாணவர்கள் பல்வேறு சூழல்களுக்கேற்பப் பேச்சுத்தமிழிலும் எழுத்துத்தமிழிலும் தெளிவாகவும் சரளமாகவும் பேசுவர்.

பேச்சுவழிக் கருத்துப்பரிமாற்றம்:

மாணவர்கள் சூழலுக்குத் தக்கவாறு பொருத்தமான முறையில் பேச்சுவழிக் கருத்துப்பரிமாற்றத்தில் ஈடுபடுவர்.

படித்தலும் நோக்கலும்:

மாணவர்கள் பல்வகையான பனுவல்களைப் பார்த்தும் படித்தும் தக்க வகையில் புரிந்துணர்வை வெளிப்படுத்துவர்.

எழுதுதல்:

மாணவர்கள் சரியான மொழியமைப்புடனும் படைப்பாக்கத் திறனுடனும் தங்கள் கருத்துகளைப் பல்வேறு வடிவங்களில் வெளிப்படுத்துவர்.

எழுத்துவழிக் கருத்துப்பரிமாற்றம்:

மாணவர்கள் சூழலுக்கேற்பப் பொருத்தமான மொழியமைப்பையும் வடிவத்தையும் பயன்படுத்தி எழுத்துவழியே கருத்துப்பரிமாறிக் கொள்வர்.

Scheme of Assessment

Paper	Description	Marks	Weighting (%)	Duration
1	கட்டுரை	60	30	2 h 00 min
2	மொழி மரபும் பயன்பாடும் மற்றும் கருத்தறிதல்	60	30	1 h 30 min
3	வாய்மொழி	60	35	15 min
	கேட்டல் கருத்தறிதல்	20	10	30 min

Subject Content

இப்பாடம் மொத்தம் 3 வினாத்தாள்களைக் கொண்டது.

தாள் 1: (60 மதிப்பெண்கள், 30%)

'அ' பிரிவு: நடைமுறை சார்ந்த எழுத்துப் படைப்பு - மின்னஞ்சல்

இப்பிரிவில் கொடுக்கப்படும் இரண்டு தலைப்புகளுள் ஏதேனும் ஒன்றினைப்பற்றி 90 சொற்களுக்குக் குறையாமல் விடையெழுதுதல் வேண்டும். உறவுமுறை, தொழில்முறை மின்னஞ்சல் வகைகளுள் ஏதேனும் ஒன்றுக்கு விடையளிக்க வேண்டும். பொருள், மொழி, அமைப்புமுறை ஆகியவற்றைக் கருத்திற்கொண்டு தேர்வெழுதுபவரின் படைப்பு மதிப்பிடப்படும்.

'ஆ' பிரிவு: கட்டுரை

இப்பிரிவில் 3 கட்டுரைத் தலைப்புகள் இடம்பெற்றிருக்கும். அவற்றுள் ஏதேனும் ஒன்றினைப்பற்றி 170 சொற்களுக்குக் குறையாமல் ஒரு கட்டுரை/கதை எழுத வேண்டும். பொருள், மொழி, அமைப்புமுறை ஆகியவற்றைக் கருத்திற்கொண்டு தேர்வெழுதுபவரின் படைப்பு மதிப்பிடப்படும்.

தாள் 2: (60 மதிப்பெண்கள், 30%)

'அ' பிரிவு: மொழி மரபும் பயன்பாடும்

இப்பிரிவில் மரபுத்தொடர்கள்/இணைமொழிகள் சார்ந்து 5 வினாக்களும் முன்னுணர்வுக் கருத்தறிதல் பகுதியில் 5 வினாக்களும் இடம்பெறும். அவை அனைத்திற்கும் விடையளித்தல் வேண்டும்.

'ஆ' பிரிவு: தெரிவுவிடைக் கருத்தறிதல் மற்றும் பிழை திருத்தம்

இப்பிரிவில் இடம்பெறும் இரண்டு பனுவல்களையொட்டி 5 தெரிவுவிடை வினாக்கள் இடம்பெறும். 'பிழை திருத்தம்' எனும் தலைப்பின்கீழ்ப் பாடத்திட்டத்திலுள்ள இலக்கணக் கூறுகளைச் சோதிக்கும் வகையில் ஒரு பனுவலை அடிப்படையாகக்கொண்டு 5 வினாக்கள் இடம்பெறும். கொடுக்கப்பட்டிருக்கும் பகுதியிலுள்ள 5 பிழையான சொற்களைக் கண்டறிந்து அவற்றைத் திருத்திச் சரியான சொல்லை எழுத வேண்டும்.

'இ' பிரிவு: சுயவிடைக் கருத்தறிதல் மற்றும் சொற்பொருள்

இப்பிரிவில் ஒரு பனுவலையொட்டி 5 சுயவிடை வினாக்களும் 3 சொற்பொருளைச் சோதிக்கும் வினாக்களும் இடம்பெறும். சுயவிடை வினாக்களுக்குரிய விடைகளைப் பகுதியின் துணைகொண்டு கண்டறிந்து சொந்த நடையில் எழுதவேண்டும்.

தாள் 3: வாய்மொழியும் கேட்டல் கருத்தறிதலும் (80 மதிப்பெண்கள், 40%)

பகுதி 1: வாய்மொழித் தேர்வு (60 மதிப்பெண்கள்)

இத்தேர்வு கீழ்க்காணும் 2 கூறுகளை உள்ளடக்கியது.

1. வாய்விட்டு வாசித்தல்
2. ஒளிக்காட்சியை ஒட்டிய உரையாடல்

பகுதி 2: கேட்டல் கருத்தறிதல் (20 மதிப்பெண்கள்)

செய்தி, உரையாடல், சிற்றூரை, கதை, அறிக்கை, விளம்பரம், அறிவிப்பு எனப் பலவகையான பனுவல்களைக் கேட்டு மாணவர்கள் 10 தெரிவுவிடை வினாக்களுக்கு விடையளிக்க வேண்டும்..

Entry Requirement

NA