

**NORTHBROOKS
SECONDARY SCHOOL**
SOARING YET ROOTED

*Sec 2 Subject
Information:
Coursework
(Exp)*



Coursework subjects for Express stream:

- Students in the Express stream take a set of compulsory subjects and can have a choice of subjects (also known as elective subjects) at the upper secondary (Secondary 3 onwards). The school offers a range of elective coursework subjects to cater to the needs and interest of our students.
- **Coursework** refers to a rigorous research paper or design project where students to analyze, think critically, plan and carry out comprehensive, thorough research which they ask questions, examine issues, gather, record, collate, interpret and evaluate data to complete a working Artefact, Design Journal, Presentation Boards, Artwork and/or Research Paper.
 - The examination question paper will be issued in January of the national examination year.
 - Students are expected to work on their coursework during scheduled sessions in school after curriculum time.
 - Students are required to work independently and adhere to the scheduled submission timeline.



Nutrition & Food Science (NFS) Syllabus in a nutshell

Nutrition & Food Science (NFS) is offered at the upper secondary level as an option for students who have an interest for the subject. The syllabus aims to provide students with a broad understanding of concepts in ***nutrition and health, food literacy and principles of food science***.

The NFS 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.*



Nutrition & Food Science (NFS) Syllabus Content

Nutrition and Health

1. Nutrients,
2. Water and Dietary Fibre
3. Diet and Health

Food Literacy

1. Food Management
2. Smart Consumer

Food Science

1. The Science in Food Preparation
2. Reactions in Food During Preparation and Cooking
3. Sensory Evaluation of Food



Nutrition & Food Science (NFS) Scheme of Assessment

| Component | Weighting |
|-------------------------------|-----------|
| Paper 1 – Written Examination | 40% |
| Paper 2 – Coursework | 60% |

Paper 1 (2 h)- 100m

Written Theory paper

- Section A: Multiple Choice Questions (15m)
- Section B: Short Answer Questions & Data Response Questions (55m)
- Section C: Open Ended Questions (30m)

Paper 2: Coursework (60%)- 80m

- 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.
- A minimum of **28 hours** of curriculum time must be assigned to discuss, facilitate and carry out the investigation report and practical work as required.



How do I know if Nutrition & Food Science (NFS) is for me?

- Entry Requirements
 - ✓ At least a pass in Food and Consumer Education (FCE) in Secondary 2
- Demands of the Syllabus
 - ✓ Good work ethics and time management skill
 - ✓ Commit to the rigour and demands of the coursework development process
 - ✓ Active use of research tools and work processing on the computer to coursework.

You need to be able to:

1. work independently;
2. think critically;
3. put in consistent effort in the coursework;
4. have a curious mind and a passion for the subject.



Post-Secondary NFS-related Courses

Singapore Polytechnic

- Food Science and Technology

Nanyang Polytechnic

- Food Science and Nutrition
- Food and Beverage Business

Temasek Polytechnic

- Food, Nutrition and Culinary Science
- Culinary and Catering Management

Republic Polytechnic

- Health Management and Promotion
- Health Services Management
- Restaurant and Culinary Operation



NFS-related Career Options

- ✓ Culinary Expert / Chefs
- ✓ Dietitians
- ✓ Food Manufacturer
- ✓ Food Scientist/Flavorists
- ✓ Food Microbiologist
- ✓ Food Technologist
- ✓ Healthcare Aides
- ✓ Nutritionists
- ✓ Personal Trainer



FAQs (NFS)

Q1: What does coursework mean?

A: Coursework refers to a rigorous research paper (approximately 20 – 25 pages) which requires students to analyze, think critically, plan and carry out comprehensive, thorough research and construct an investigative experiment (GCE 'O' Level only) in which they ask questions, examine issues, gather, record, collate, interpret and evaluate data. It will involve students in carrying out any of the following: comparative studies; food science investigative work. These will be conducted in relation to the research paper. Practical work is an essential feature of the coursework which will take up 24% of the total coursework score.

Q2: What are the components in Coursework?

A: There are 6 components for Coursework submission which comprises of research paper (approximately 20 – 25 pages of report writing) The components are Research, Decision making, Investigation, Execution (organization & management, manipulation, product & presentation) Evaluation.



FAQs (NFS)

Q3: What is the format for coursework report submission?

A: The coursework report must be word processed and submitted electronically. The recommended typeface is Arial, minimum font size 11, or Times New Roman, minimum font size 12. Digital photographic evidence of the Exploratory Study 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.

Q4: Why is NFS offered to a maximum of 20 students?

A: The Culinary Lab is considered a special room which limits the number of students due to safety constraints. Also the NFS practical skills and techniques taught need to be closely supervised and monitored, hence a fixed class size of 20 is mandated.

Q5: Must I be proficient in culinary skills to apply for NFS?

A: No, all technical skills will be taught in the curriculum to prepare for national examinations. However, it will be advantageous if you are already equipped with some prior knowledge. Another advantage is to have access to basic kitchen equipment at home for culinary practice.



FAQs (NFS)

Q6: How much time is required to complete the coursework?

A: A duration of 28 hours is specified for the O-level coursework and 25 hours is specified for the N'level coursework. As coursework must be done in school, students will complete it within extended curriculum hours.

Q7: Is NFS a relevant subject considered for aggregate computation to the Pre-University (i.e. Junior Colleges and Millennia Institute), Polytechnic and ITE courses?

A: Yes, NFS is one of the relevant subjects to Pre-University courses, Science-related courses in Polytechnics. Otherwise, it can be considered as one of the Best 2 Other Subjects for aggregate computation in Polytechnics. For ITE courses, NFS can be considered as one of Best 2 or Best 3 Other Subjects for aggregate computation



ART Syllabus in a nutshell

Art education will help a student to think critically and creatively from multiple perspectives and become culturally aware individuals in our society.

The Art syllabus is designed to provide students with the opportunity 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.



ART Syllabus Content

Studio Practice

1. Creation of artworks
2. Development of various art elements and design principles.
3. Exploration of media such as painting, sculpture,
4. photography, stained glass, ceramics, installation, multi-media and animation.
5. Acquisition of research, experimentation and exploration, idea development, personal reflection and evaluation skills

Study of Visual Arts

Critical learning experiences in the Study of Visual Arts via the broad themes of:

1. Art as Narrative and Inspiration
2. Art as Expression and Identity
3. Art as Communication and Design.



ART Assessment Objectives

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

1. Gathering and Investigation of Information
2. Exploration and Development of Ideas/Concepts
3. Aesthetic Qualities
4. Selection and Control of Materials and Technical Processes
5. Personal Response

ART Scheme of Assessment

| Component | Weighting |
|--------------------------------|-----------|
| Paper 1 – Coursework | 60% |
| Paper 2 – Drawing and Painting | 40% |

Paper 1: Coursework

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

Paper 2: Drawing and Painting

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



How do I know if ART is for me?

- Entry Requirements
 - ✓ At least a pass in Art in Secondary 2
 - ✓ An inquiring mind, a spirit of experimentation and a passion for the visual arts
- Demands of the Syllabus
 - ✓ Spend time to hone their sensitivity to materials and processes to develop a firm grounding in both the practical and theoretical aspects of Art and Design.
 - ✓ Attend enrichment activities such as workshops, artists' talks and learning journeys to art galleries and museums organised by the school or MOE.
 - ✓ Participate in art-related competitions to sharpen their skills and participate in school or national exhibitions.
 - ✓ Commit to the rigour and demands of the art curriculum and art development process.

You need to be able to:

1. work independently for most assignments;
2. conduct visual research by taking their own pictures and reading about art, artworks and artists;
3. be diligent in completing their drawing and painting assignments at home.



Post-Secondary ART-related Courses

Nanyang Polytechnic

Animation & Visual Effects

Visual Communication

Ngee Ann Polytechnic

Film, Sound & Video

Republic Polytechnic

Design for Games & Gamification

Singapore Polytechnic

Interior Design

Media, Arts & Design

Nanyang Academy of Fine Arts

Fine Arts 3D Design

Design & Media

Fashion Studies

La Salle College of the Arts

Animation

Interior Design

Design for Communication & Experiences



ART-related Career Options

- ✓ Art Gallery Curator
- ✓ Game Designer/Programmer/Producer
- ✓ Graphic Designer
- ✓ Media Industry - broadcast, producer, camera professional
- ✓ Product Designer
- ✓ Visual Graphics Professional
- ✓ 2D/ Animation/ 3D Art Visual Artist
- ✓ Architectural Technology
- ✓ Filmmaking (Cinematography)
- ✓ Interactive Design
- ✓ Motion Graphics
- ✓ Performance Production
- ✓ Visual Effects
- ✓ Visual Merchandising



FAQs (ART)

Q1: What is Paper 1-Coursework?

A: The Coursework unit comprises of a finished artwork and not more than **eight A2 sheets of preparatory studies**. The question paper will be issued in January and students are expected to work on their coursework during scheduled sessions in school after curriculum time. These coursework sessions are usually scheduled on Fridays from 2-5pm. Students are required to work independently and be self-directed in order to manage their own work to adhere to the scheduled submission timeline.

Q2: What is Paper 2-Drawing and Painting?

A: It is an exam where students are given 3 hours to complete an artwork. The question paper will be given three weeks before the exam and students must use that time to complete **five A3 sheets of preparatory drawings** that must be submitted on the day of the examination. Students are required to work independently in order to manage their own work in order to complete their preparatory drawings on time.



FAQs (ART)

Q3: Must my child be proficient in different mediums such as Acrylic painting and Watercolor painting?

A: No, the various mediums will be taught to your child. However, it will be advantageous if your child is already equipped with prior knowledge of the skills used in these mediums.

Q4: Is Art a relevant subject considered for aggregate computation to the Pre-University (i.e. Junior Colleges and Millennia Institute), Polytechnic and ITE courses?

A: Yes, Art is one of the relevant subjects to Pre-University courses, Business-related and Design-related courses in Polytechnics. Otherwise, it can be considered as one of the Best 2 Other Subjects for aggregate computation in Polytechnics. For ITE courses, Art can be considered as one of Best 2 or Best 3 Other Subjects for aggregate computation



MUSIC Syllabus in a nutshell

- Music is offered at the upper secondary level as an option to musically-inclined students who wishes to pursue a deeper and more comprehensive study in the subject.
- Candidates will understand and appreciate the historical, social and cultural contexts of music from the following Areas of Study:
 1. Western Classical,
 2. Asian Music (Chinese, Malay, Indian, Gamelan),
 3. Popular Music & Jazz

The Music syllabus is designed to provide students with the opportunity to:

- ✓ Develop critical thinking and music creativity
- ✓ Develop communication, collaborative and interpretative skills in music
- ✓ Develop perception and awareness of musical cultures and traditions, both local and global
- ✓ Develop independent learners with inquiring and innovative minds through reflective practices in music
- ✓ Provide the basis for an informed and life-long appreciation of music



MUSIC Assessment Objectives

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

1. Critical thinking and musical creativity
2. Communicative and interpretative skills in music
3. Perception and awareness of musical cultures and traditions, both local and global
4. An informed and lifelong appreciation of music

MUSIC Scheme of Assessment

| Paper | Title | Weighting | Assessment Format | Duration | Marks |
|-------|---------------|-----------|-----------------------|--|-------|
| 1 | Music Studies | 40% | Written Examination | 1 hour 30 minutes | 75 |
| 2 | Creating | 30% | (i) Composition | 9 weeks, 5 hours of supervision time | 40 |
| | | | (ii) Reflection Notes | | 10 |
| 3 | Performing | 30% | (i) Recital | 5–10 minutes | 40 |
| | | | (ii) Reflection Notes | – | 10 |



How do I know if MUSIC is for me?

- Entry Requirements

- ✓ All applicants must sit for a Selection Test
- ✓ All applicants must be able to perform 2 contrasting pieces on their selected instrument

- Demands of the Syllabus

- ✓ Music classes will be held weekly at EXTERNAL music centres (Ang Mo Kio SS, Ahmad Ibrahim SS) in the afternoon.
- ✓ The duration of each class is approximately 3 hours.
- ✓ Study music in greater depth – students must listen to a wide range of music (e.g., listen to music on Spotify or Youtube, attend concerts etc.)
- ✓ Participate in musical activities (e.g., Lunchtime concerts, performing arts CCA etc.)

You need to be able to:

1. Ability to make and present music, with basic skills in music appreciation,
2. Good time management skills, able to cope with extended lessons in the afternoons to for music curriculum at external music centre,
3. Keen interest and willingness to commit to two/three years of in-depth study in Music



Post-Secondary MUSIC-related Courses

Ngee Ann Polytechnic

Dip. in Film, Sound & Video

Republic Polytechnic

Dip. in Sonic Art

Singapore Polytechnic

Dip. in Music & Audio Technology

Nanyang Academy of Fine Arts

Dip. in Music

Dip. in Music Teaching

La Salle College of the Arts

Dip. in Audio Production

Dip. in Music

Various JCs

GCE H2/H3 Music



MUSIC-related Career Options

- ✓ Music directors/ conductors
- ✓ Music teacher
- ✓ Music therapist
- ✓ Recording engineers
- ✓ Video game sound designer
- ✓ Video and sound engineers



FAQs (MUSIC)

Q1: Is Music offered within Northbrooks Secondary School?

A: No, Music is not offered within the school.

- You will need to apply to study Music in one of the O-level music centres (e.g Ang Mo Kio Sec, Ahmad Ibrahim Sec, CHIJ St Nic, Catholic High School)
- Music classes will be held weekly at the selected music centres in the afternoon.
- Lesson day will vary depending on the school assigned.
(e.g. CHIJ St Nic has lessons on Tuesday but Catholic High is on Wednesday)
- The duration of each class is approximately 3 hours.
- Successful applicants after selection tests will be invited to choose their centres in September.

Q2: Can my child take Music at O-level with other coursework subjects like NFS, D&T, Art?

A: No, Music is a coursework subject and cannot be taken with other coursework subjects to help manage the student's overall load and individual subject expectations.



FAQs (MUSIC)

Q3: Do we submit our application together with the other subjects at the end of the year?

A: No, application to study Music at O-Level is done separately online with the uploading of all the necessary supporting documents as stipulated by MOE. You may get more information on the application procedure from the school's music coordinator, Mr Gavin Ler.

Q4: Who can apply for the O-Level Music Course?

A: The O-Level Music course is for students with a strong interest to develop their knowledge, skills and understanding of music beyond the foundations laid by the primary and lower secondary music syllabus. It is also suitable for students who have musical performance background from experiences in CCAs, school-based music programmes or external music-related activities. Students who will be in Secondary 3 Express / Normal (Academic) or Secondary 4 Normal (Academic) course in 2023 may apply online in 2022.



FAQs (MUSIC)

Q5: What should I expect in the Selection Exercise?

A: Students who have expressed their interest to take up O level music as a subject will receive a sample practice Selection exercise on SLS. Topics tested include:

- Melody (e.g. accidentals, articulation; contour; intervals; mood)
- Tonality (major and minor), pentatonic mode & Key signature (score reading of up to one sharp and one flat)
- Harmony (I – V – I, I – vi – IV – V, I – IV – V – I)
- Tempo, Rhythm and Time Signature (simple duple/triple/quadruple, compound duple/triple)
- Instrumentation and/or tone colour (recognise and identify broad categories of musical instruments from western and non-western traditions, e.g. string, wind, percussion)
- Dynamics; Musical Textures & Form/Structure (e.g. Binary (AB), Ternary (ABA), Rondo, Theme and Variations, 12-bar Blues, Popular song structures)

Q6: Do I still need to complete both Selection Exercise components if I already have external certifications in practical and theory?

A: Yes, all applicants must complete both components regardless of attainment of certifications by external examination boards.



Design & Technology (DT) Syllabus in a nutshell

The Design & Technology (D&T) syllabus is designed to engage students in designing and prototyping ideas through applying technology.

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.

The D&T syllabus aims 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, mechanisms and electronics)*



Design & Technology (D&T) Syllabus Content

A KNOWLEDGE WITH UNDERSTANDING

- designing and prototyping
- nature of the design process
- plan and manage their project

B DESIGN THINKING SKILLS

- detect, frame and understand everyday needs for design opportunities
- generate tentative ideas through inquiry
- analyse and synthesise relevant knowledge and information

C DESIGN MANIPULATING SKILLS

- sketch proposed design solution
- build mock-up(s) to test ideas for decision making
- work with appropriate technology for prototyping



How do I know if Design & Technology (D&T) is for me?

- Entry Requirements
 - ✓ At least a pass in Design & Technology (D&T) in Secondary 2
- Demands of the Syllabus
 - ✓ Subject is primarily project-based over a duration of 22 weeks.
 - ✓ Engage in recurring problem-solving design activities.

You need to be able to:

1. have the self-discipline in managing the project within the given timeframe;
2. be competent in drawing techniques for design communication.



Scheme of Assessment

| Paper | Duration | Assessment Domains | | | Total |
|-----------------------------|----------|--------------------------------------|--------------------------------|---------------------------------------|-------|
| | | A Knowledge with Understanding | B Design Thinking Skills | C Design Manipulating Skills | |
| 1 Written Examination | 2 hours | 25% | 10% | 5% | 40% |
| 2 Design Project | 22 weeks | 15% | 20% | 25% | 60% |
| Overall | | 40% | 30% | 30% | 100% |

- The Design Project is an individual coursework-based examination. The examination will be conducted over 22 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.



Post-Secondary D&T-related Courses

Singapore Polytechnic

- Design Studies

Nanyang Polytechnic

- Communication & Motion Design
- Experiential Product & Interior Design
- Game Development & Technology

Temasek Polytechnic

- Product Experience & Design
- Interior Architecture & Design
- Communicative Design

Republic Polytechnic

- Digital Design & Development
- Engineering Design with Business



D&T-related Career Options

- ✓ Graphic Designer
- ✓ Industrial Designer
- ✓ Web Developer
- ✓ Software Developer
- ✓ Multimedia Artist
- ✓ Engineer, Architect
- ✓ Landscape Architect/Designer
- ✓ Interior Designer
- ✓ Renderer
- ✓ Product Designer



FAQs (D&T)

Q1: Is D&T useful if I want to go JC?

A: While not directly relevant to any H2 subject in Junior College, skills obtained in the study of Design and Technology is relevant and useful in H1 Project Work.

Q2: Will D&T be helpful for me if I want to go polytechnic?

A: Yes, Design and Technology is one of the subjects that is required to be read should the student wish to take up courses in the area of Engineering, Design or Architecture.

Q3: I am passionate about D&T, but I failed my Secondary 2 D&T, will I still have a chance?

A: A pass is required for a chance to qualify for Upper Secondary D&T, and placement is decided by choice and aptitude of the batch of students.

Q4: Why is D&T offered to a maximum of 20 students?

A: The D&T workshop is considered a special room which limits the number of students due to safety constraints. Also the D&T practical skills and techniques taught need to be closely supervised and monitored, hence a fixed class size of 20 is mandated.



D&T Useful links

- Pls scan the QR code to SEAB syllabus info, and other useful info

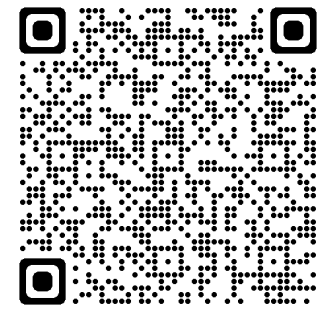


Useful links-Syllabuses Examined in 2024

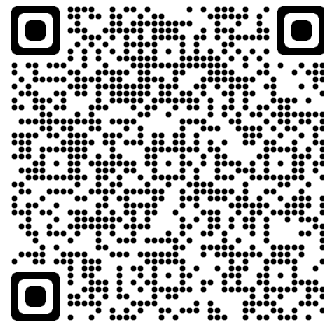
O-Level:



N(A)-Level:



N(T)-Level:



Useful links

- Direct School Admission – JC

<https://www.moe.gov.sg/admissions/direct-admissions/dsa-jc>

- POLYTECHNIC EARLY ADMISSIONS EXERCISE (POLY EAE)

<https://www.moe.gov.sg/admissions/direct-admissions/eae>

- ITE Early Admissions Exercise (ITE EAE)

<https://www.moe.gov.sg/admissions/direct-admissions/ite-eae>

