NEXUS INTERNATIONAL SCHOOL MALAYSIA

IBDP Options
Information Booklet

OUR PURPOSE

To educate the youth of the world to take their productive place as leaders in the global community.

OUR CORE VALUES

Respecting and Caring for Each Other
Being Dedicated to a Culture of **E**xcellence
Openness in **C**ommunication
Acting with **I**ntegrity
Being **P**assionate in What We Do
Creating **E**njoyable Environment

OUR VISION

Nexus International School will be an internationally minded learning community that nurtures and supports every child's emotional, physical, creative and intellectual needs in order that they can achieve academic success and become globally responsible citizens.
We will accomplish this by celebrating diversity and challenging minds.

OUR PROMISE

To foster the gifts and talents that reside in everybody through careful mentorship and guidance based on respect.
To provide a nurturing environment for these talents; one that is innovative, progressive and grounded in trust, compassion and respect.

Contents

Opening Message from the Head of Secondary

It gives me great pleasure to introduce you to the International Baccalaureate Diploma Programme (IBDP) at Nexus International School Malaysia. I hope that you find the information in this booklet useful in making the best subject choices for your diploma.

The fact that you are reading this probably means that you have made one very important choice already and that is to choose the IBDP over other post-16 systems of education. It is my firm belief that the IBDP is the highest quality programme available for senior international learners. The academic rigour, breadth of study, emphasis on critical thinking, internationalism and aim of developing the whole individual make it an unmatched and unique qualification.

The value and popularity of the IBDP has not been lost on many schools who have chosen to adopt it in recent years and it's reputation continues to grow. In particular, the growth in the Asia-Pacific region has been phenomenal. At Nexus we are confident that we are offering an excellent programme, which has been authorised by the IB organisation. We have highly qualified, experienced and enthusiastic teachers, who have undergone training in the IBDP according to the requirements demanded of the IB organisation, and a carefully planned curriculum across all subjects. We have a wide range of subjects on offer, which should ensure we can provide an appropriate course of study for all. In keeping with the Nexus approach to learning we utilise the latest in technological innovations and educational thinking in a supportive environment for our learners.

We are also very proud at Nexus of the success of our programme in terms of academic achievement. Nexus has a track record of excellent results, achieving the highest average score in Malaysia on more than one occasion. Our results have always been significantly above the IB world averages and enable our graduates to progress onto the higher education institution of their choice. The IBDP is welcomed by universities around the globe and our graduates frequently attend the most prestigious institutions, often with scholarships.

Personally, I am excited and honoured to be helping to develop the IBDP at Nexus International School and look forward to working together with all our new and existing learners.

Please do not hesitate to contact us if there is anything you wish to discuss, or if you require more information about the IBDP programme at Nexus International School Malaysia.

Morag McCrorie
Head of Secondary

IB Mission Statement

The IBDP aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect.

To this end, the organisation works with schools, governments and international organisations to develop challenging programmes of international education and rigorous assessment.

These programmes encourage learners across the world to become active, compassionate and life long learners who understand that other people, with their differences, can also be right.

The IB Learner Profile

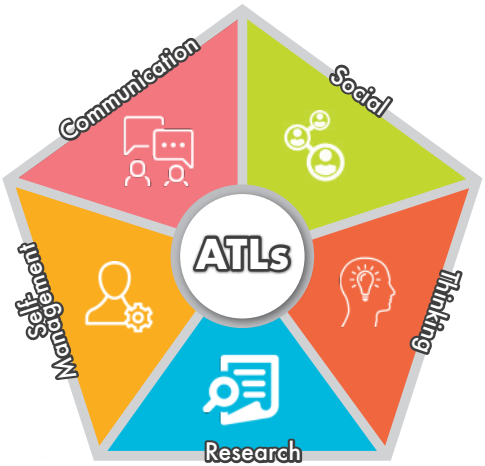
The IBDP emphasises attitudes and cross-curricular skills that the learners will be encouraged to develop over the two years of study through all the components.

We ensure that learners have opportunities both in and out of the classroom to put them into practice.

Approaches to Learning (ATLs)

ATL are deliberate strategies, skills and attitudes that permeate the IB teaching and learning environment.

ATL supports the IB belief that a large influence on a student's education is not only what you learn but also how you learn.



The IBDP is designed to offer the learner breadth of study, whilst still allowing for specialisation in areas in which they are interested.

Learners are required to choose one subject from each of the subject groups. They may however choose to take a second subject from Group 3 (Individuals and Societies) or Group 4 (Science) in place of an Arts subject if they prefer. This enables learners to study two sciences or humanities subjects if they wish or this is required for their chosen career path. Learners must select three subjects at higher level (HL) and three at standard level (SL). Each subject is graded from 7 (highest) to 1 (lowest)

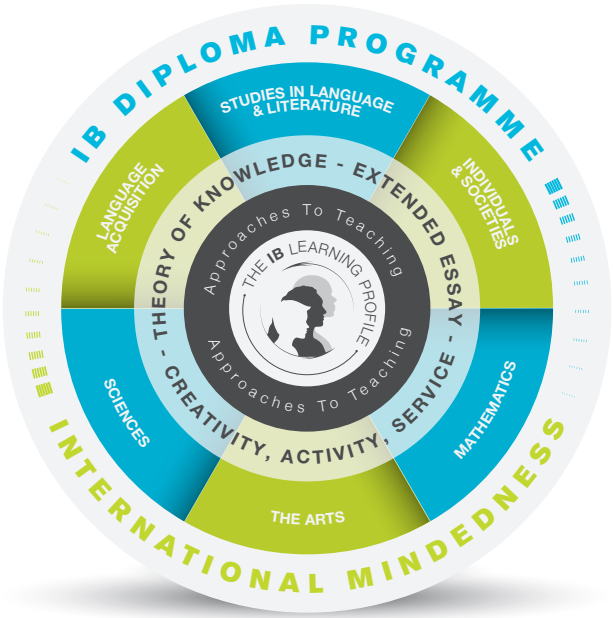
At the core of the circle are the programme's three compulsory elements: Theory of Knowledge (TOK), the Extended Essay (EE) and Creativity, Activity, Service (CAS). Up to three points are awarded for TOK and the Extended Essay. The maximum points score for a learner is therefore 45.

The IB Programme also offers alternative, individualised pathways.

Learners may choose not to enroll in the **Full** Diploma Programme, and instead take only particular Diploma subject **Courses**, which may, or may not include participation in the core components. A learner may take as many, or as few courses as they wish, after consultation with the IB Co-ordinator. The award for each of these courses is not therefore the full IBDP, but a series of scores from one to seven for each subject course.

Learners who wish to take the full diploma should normally have achieved 3Bs and 3Cs at IGCSE, including English, Mathematics and Science. There is some flexibility depending on course choice, additionally there are some subject specific requirements. Learners who have not taken IGCSE should achieve similar grades in the programme they have followed.

The IB is recognised as a rigorous qualification highly regarded by universities around the world.



IBDP Core

Creativity, Activity, Service (CAS)

CAS is the part of the IBDP that helps develop the whole individual, promoting compassionate thinking and responsibility for our society. Creativity is a skill or hobby – ideally something new or if an existing hobby it should offer some new challenge. Activity is usually a sport but could involve a physical activity such as rock climbing for example. Service is often seen as the most important part of CAS as this provides opportunities for significant personal growth and could involve an activity such as visiting hospitals, or interacting with less advantaged members of society. No points are awarded for the CAS programme, but a learner who does not complete it satisfactorily is not eligible to be awarded the IB Diploma.

Theory of Knowledge (TOK)

Theory of Knowledge stresses critical thinking skills and questioning. It is concerned with the nature of knowledge, how we know what we know and different types of knowledge. Through reflecting on different ways of thinking, TOK is a good way for learners to consider and challenge their own pre-conceived ideas. It is also an excellent vehicle to encourage cross-curricular links by comparing differences and commonalities in different areas of knowledge.

The Extended Essay (EE)

A 4000 word essay undertaken by the learners under the supervision of a teacher. Such learning relates to the 'independent learner' referred to in the mission statement and it is intended that the learner will pursue an area of interest to them. It promotes independent research skills and is often a good topic for learners to bring up at university interviews where institutions are looking for 'something extra'.

The grade for the EE is combined with the grade for TOK and learners can gain up to three bonus points.

Induction Residential Weekend

An IBDP learner is taught to move beyond the given norms, to confront boundaries and undertake challenges that will push their learning to new heights. Within the international context of the IBDP, Nexus learners will be immersed in active learning equipping them to step beyond the classroom.

With the aim of building a solid base for learners to develop those qualities and move into, or beyond, their first year of the IBDP, all Year 12 learners attend the IBDP Induction Residential at the very beginning of the new academic year in August. During this residential experience, learners will be involved in team building activities with Year 13 learners providing various perspectives on how best to thrive in the programme for the incoming group. Subject teachers, key members of the IB Leadership Team, and members of the Secondary Leadership Team are involved to help and advise all learners throughout the weekend.

CAS Residential Trip

In Year 12 learners get an oppportunity to apply their skills in an authentic context. The CAS trip covers all three aspects of CAS - Creativity, Action and Service. The trip is planned to take them out of their comfort zone, it demands real team work and presents the learners with real life challenges. The trip is compulsory and costs are included in the school fees.

Support for IBDP Learners

A number of support mechanisms to assist IBDP learners with their studies are offered. Whilst Nexus is not selective in its admissions policy only those learners who are capable of benefitting from the programme will be offered a place.

Mentoring

A programme of 1:1 mentoring for learners provides individual support for our learners in a manner that affords the development of independence, self-efficacy and wellbeing. The mentoring programme involves several strands, but first and foremost, every member of staff (not just teachers) are mentors to the young people in our care who need additional support.

Personal and Social Development

The Personal and Social Development (PSD) programme supports learners to develop life and study skills necessary for success at the IB and beyond. Learners are supported by a specialist team of IB tutors who will guide them over the course of the two year programme. Learners who need additional support also have access to our full-time school counsellor.

Study Skills

Highly developed study skills are the key to achieving success in the IBDP therefore Nexus emphasizes the teaching of these both within lessons and during tutor time. Topics such as referencing, research, time management and effective note-taking will be addressed.

Inclusion and other Provision

The Inclusion department assists learners who are second language English speakers through in-class support or through sessions outside of subject-specific lessons. Diagnostic tests can be conducted to access other types of learning difficulties and support is offered as necessary. Learners can follow a tailor made pathway of certificates leading to a Partial Diploma.

HE Guidance and Careers Counselling

A Careers and Higher Education Counsellor assists learners seeking entrance to further education institutions. This takes the form of inviting representatives of universities to the school in order to meet learners, offering advice on a suitable course of study or providing guidance on the process of applying to university and how to source financial assistance.

Choosing Subjects

Some learners have a very fixed idea of what they want to do after school whilst others are not so sure. It is important to make sure that subject choice does not prevent a learner from pursuing a desired course or career. It is also important not to become too fixated on going down one particular path at the exclusion of others. Plans often change and traditional career paths are becoming increasingly eroded in the fast-changing and technological environment in which today's young people will seek employment. It is important to be flexible whilst keeping options open. The IBDP circle is designed to help learners do this. A good all-round education, reflecting strengths and weaknesses, is an effective touchstone when making choices.

Whilst it may be possible to change the combination of courses early on in the year, it is better to get the combination correct from the beginning. Learners need to:

- Be honest about their capabilities. A Higher Level course in a subject for which they do not have an aptitude will be very challenging. Some subjects have a minimum entry level.
- Choose subjects which they enjoy and have an interest in. We all work better when doing something we like.
- Base their choices on the facts, not on hearsay. Do some research or ask the Careers + Higher Education Counsellor what the entry requirements for a particular university course are.

Group	Higher Level	Standard Level
1	Language A: English Language and Literature; Malay Literature; Mandarin Language and Literature	Language A: English Language and Literature; Malay Literature; Mandarin Language and Literature; Self-Taught Language
2	Language B: Mandarin; English; French; Spanish	Language B: Malay; Mandarin; French or Spanish Ab initio: French or Spanish; Mandarin
3	Geography; History; Economics; Business Management; Psychology	Geography; History; Economics; Business Management; Psychology
4	Biology; Chemistry; Physics; Sports, Exercise and Health Science (SEHS); Computer Science	Biology; Chemistry; Physics; Sports, Exercise and Health Science (SEHS); Computer Science
5	Mathematics: Analysis & Approaches SL and HL	Application and Interpretation SL and HL, Mathematics: Application and Interpretations SL and HL
6	Visual Arts; Film; Theatre Arts; Music or an additional Science or Humanities subject	Visual Arts; Film; Theatre Arts; Music; or an additional Science or Humanities subject

Availability of a subject is dependent on number of learners who choose it.

Group 2 additional information

Engilsh B can only be taken by a learner who studies a language other than English in Group 1
Malay B must be sat in the November examination schedule.

Subject Information

Group 1: Language A

Group 1 languages require near-native level of written and spoken skills.

English Language + Literature: HL/SL

The Language and Literature course covers literary and non-literary texts related to the following concepts:

- Readers, writers and texts
- Time and space
- Intertextuality

Topics and texts studied are varied and interesting in order to encourage learners to think critically about texts, audience and purpose.

The course is designed to develop a range of skills: close reading, textual analysis, creative writing, formal writing, along with presentation and speaking skills.

Malay Literature: HL/SL

The Literature course covers:

- Part 1: Works in translation
- Part 2: Detailed study
- Part 3: Literary genres
- Part 4: Options (in which works are freely chosen)

The course is designed to develop a range of literary skills such as textual analysis, commentary writing and comparative essay writing along with presentations skills. It provides oppurtunities for learners to develop their analytical skills in the Malay language as well as an appreciation of literature. A range of texts are studied in order to encourage learners to think critically about audiences and purposes.

Self-taught Languages: SL only

At Nexus International School our learners speak a wide variety of languages and it is not feasible to provide staff to teach each one. Under these circumstances it may be possible to arrange a self-taught option for a learner. In this case it is the responsibility of the parents, in consultation with the school, to help to arrange a tutor (at their own cost) who would either come into school, or who the learner would interact with online. A member of the Nexus language department monitors the progress of each learner on such a scheme. Learners who complete the Self-taught Language A programme are eligible for the Bilingual Diploma.

Chinese Language + Literature: HL/SL

The Language + Literature course covers:

- Language in Cultural Context
- Language and Mass Communication
- Literature - texts and contexts
- Literature - critical study.

Topics and texts studied are varied and interesting in order to encourage learners to think critically about texts, audience and purpose.

The course is designed to develop a range of skills: close reading, textual analysis, creative writing, formal writing, along with presentation and speaking skills.

Group 2: Language

Malay, Chinese, French, Spanish and English: HL/SL

The Language B course covers 5 Themes:

- Identities eg being global citizens, beliefs & ways of life, beauty & health
- Experiences eg pilgrimage, extreme sports
- Human Ingenuity eg the science behind robots, GM food; social media-related culture
- Social Organisation eg families, marriage, minorities, education, migrants
- Sharing the Planet eg charities, world development, climate change, democracy

Two of the following Optional Topics are also studied:

- Cultural diversity
- Customs and traditions
- Health
- Sport and pastimes
- Science and technology

HL learners will additionally study in-depth 2 literary texts:

HL learners will additionally study in-depth 2 literary texts for the oral exam while SL will do their presentations based on an image they are given. At both HL and SL, learners will be investigating the cultural aspects and the language associated with their chosen language. Learners in both cases will reach a language level where they can communicate in their chosen language with native speakers on a range of topics.

Ab Initio

No previous knowledge or extremely limited knowledge of the language is required.

French or Spanish; Mandarin: SL only

The Ab Initio course covers:

- Identities
- Experiences
- Human ingenuity
- Social organization
- Sharing the planet

The course is designed so that the topics covered are both interesting and varied in order for the learner to develop a wide and rich vocabulary and therefore be able to communicate with native speakers on a broad range of subjects. This course is aimed at beginners or near beginners.

Group 3: Individuals and Societies

Business Management: HL/SL

The Business Management course covers:

- Business organisation and environment
- Human resources
- Accounts and finance
- Marketing
- Operations management

The course is designed to develop learners' knowledge and understanding of business management theories, as well as their ability to apply a range of tools and techniques. Learners are required to analyse, discuss and evaluate business activities at local, national and international levels. Learners explore a range of organizations from all sectors, as well as the socio-cultural and economic contexts in which those organizations operate.

Economics: HL/SL

The Economics course covers:

- Microeconomics
- Macroeconomics
- International economics
- Development economics

The study of economics is essentially about dealing with scarcity, resource allocation and the methods and processes by which choices are made in the satisfaction of human wants. As a social science, economics uses scientific methodologies that include quantitative and qualitative elements. These economic theories are not to be studied in a vacuum—rather, they are to be applied to real-world issues. Prominent among these issues are fluctuations in economic activity, international trade, economic development and environmental sustainability.

The nine key concepts that underpin the economics course (scarcity, choice, efficiency, equity, economic well-being, sustainability, change, interdependence and intervention) are integrated into the conceptual understandings of all the units.

Geography: HL/SL

The Geography core course covers:

- Population distribution - changing population
- Global climate - vulnerability and resilience
- Global resource consumption and security

There is a choice from 7 optional topics plus an HL extension.

The course is firmly grounded in the real world and encourages learners to focus on the interactions between individuals, societies and the physical environment in both time and space. Learners identify trends and patterns in these interactions and examine the processes behind them. They investigate the way that people adapt and respond to change and evaluate management strategies associated with such change.

History: HL/SL

The History core course covers:

- Authoritarian states
- Independence movements
- Rights and protests

In addition, there are extension topics for HL learners.

The course is a world history course based on a comparative and multi-perspective approach to history. Learners study different types of history, including political, economic, social and cultural providing a balance of structure and flexibility. Learners are encouraged to think historically and to develop historical skills as well as gaining factual knowledge. They develop the skills of critical thinking, and an understanding of multiple interpretations of history. Learners engage in a challenging and demanding critical exploration of the past.

Psychology: HL/SL

The Psychology Course includes 4 Core units, each with HL extension topics:

- Research Methods
- Sociocultural Approach to Psychology
- Cognitive Approach to Psychology
- Biological Approach to Psychology

In addition, there are four optional units from which SL learners choose one (1) and HL learners choose two (2).

The course examines the interaction of biological, cognitive and sociocultural influences on human behaviour, thereby adopting an integrative approach. Learners develop an understanding of how psychological knowledge is generated, developed and applied which enables them to achieve a greater understanding of themselves and appreciate the diversity of human behaviour. The ethical concerns raised by the methodology and application of psychological research are also key considerations.

Group 4: Sciences

Biology: HL/SL

The DP biology course promotes concept-based teaching and learning to foster critical thinking.

The DP biology course is built on:

- Approaches to learning
- Nature of science
- Skills in the study of biology.

These three pillars support a broad and balanced experimental programme. As students progress through the course, they become familiar with traditional experimentation techniques, as well as the application of technology. These opportunities help them to develop their investigative skills and evaluate the impact of error and uncertainty in scientific inquiry. The scientific investigation then places a specific emphasis on inquiry-based skills and the formal communication of scientific knowledge. Finally, the collaborative sciences project extends the development of scientific communication in a collaborative and interdisciplinary context, allowing students to work together beyond the confines of biology.

The Biology course covers:

Form and function

- Carbohydrates and lipids
- Proteins
- Membranes and membrane transport
- Organelles and compartmentalization
- Cell specialization
- Gas exchange
- Transport
- Muscle and motility
- Adaptation to the environment
- Ecological niches

Interaction and interdependence

- Enzymes and metabolism
- Cell respiration
- Photosynthesis
- Chemical signalling
- Neural signalling
- Integration of body systems
- Defence against disease
- Populations and communities
- Transfer of energy and matter

Continuity and change

- DNA replication
- Protein synthesis
- Mutations and gene editing
- Cell and nuclear division
- Gene expression*
- Water potential
- Reproduction
- Inheritance
- Homeostasis
- Natural selection
- Sustainability and change
- Climate change

Chemistry: HL/SL

The DP chemistry course promotes concept-based teaching and learning to foster critical thinking.

The DP chemistry course is built on:

- approaches to learning
- nature of science
- skills in the study of chemistry

These three pillars support a broad and balanced experimental programme. As students progress through the course, they become familiar with traditional experimentation techniques, as well as the application of technology. These opportunities help them to develop their investigative skills and evaluate the impact of error and uncertainty in scientific inquiry. The scientific investigation then places a specific emphasis on inquiry-based skills and the formal communication of scientific knowledge. Finally, the collaborative sciences project extends the development of scientific communication in a collaborative and interdisciplinary context, allowing students to work together beyond the confines of chemistry.

The Chemistry course covers:

Structure 1. Models of the particulate nature of matter

- Structure 1.1—Introduction to the particulate nature of matter
- Structure 1.2—The nuclear atom
- Structure 1.3—Electron configurations
- Structure 1.4—Counting particles by mass: The mole
- Structure 1.5—Ideal gases

Structure 2. Models of bonding and structure

- Structure 2.1—The ionic model
- Structure 2.2—The covalent model
- Structure 2.3—The metallic model
- Structure 2.4—From models to materials

Structure 3. Classification of matter

- Structure 3.1—The periodic table: Classification of elements
- Structure 3.2—Functional groups: Classification of organic compounds

Reactivity 1. What drives chemical reactions?

- Reactivity 1.1—Measuring enthalpy change
- Reactivity 1.2—Energy cycles in reactions
- Reactivity 1.3—Energy from fuels
- Reactivity 1.4—Entropy and spontaneity (Additional higher level)

Reactivity 2. How much, how fast and how far?

- Reactivity 2.1—How much? The amount of chemical change
- Reactivity 2.2—How fast? The rate of chemical change
- Reactivity 2.3—How far? The extent of chemical change

Reactivity 3. What are the mechanisms of chemical change?

- Reactivity 3.1—Proton transfer reactions
- Reactivity 3.2—Electron transfer reactions
- Reactivity 3.3—Electron sharing reactions
- Reactivity 3.4—Electron-pair sharing reactions

Physics: HL/SL

The DP physics course promotes concept-based teaching and learning to foster critical thinking.

The DP physics course is built on:

- approaches to learning
- nature of science
- skills in the study of physics.

These three pillars support a broad and balanced experimental programme. As students progress through the course, they become familiar with traditional experimentation techniques, as well as the application of technology. These opportunities help them to develop their investigative skills and evaluate the impact of error and uncertainty in scientific inquiry. The scientific investigation then places a specific emphasis on inquiry-based skills and the formal communication of scientific knowledge. Finally, the collaborative sciences project extends the development of scientific communication in a collaborative and interdisciplinary context, allowing students to work together beyond the confines of physics.

A. Space, time and motion

A.1 Kinematics
A.2 Forces and momentum
A.3 Work, energy and power
A.4 Rigid body mechanics
A.5 Galilean and special relativity

B. The particulate nature of matter

B.1 Thermal energy transfers
B.2 Greenhouse effect
B.3 Gas laws
B.4 Thermodynamics
B.5 Current and circuits

C. Wave behaviour

C.1 Simple harmonic motion
C.2 Wave model
C.3 Wave phenomena
C.4 Standing waves and resonance
C.5 Doppler effect

D. Fields

D.1 Gravitational fields
D.2 Electric and magnetic fields
D.3 Motion in electromagnetic fields
D.4 Induction

E. Nuclear and quantum physics

E.1 Structure of the atom
E.2 Quantum physics
E.3 Radioactive decay
E.4 Fission
E.5 Fusion and stars

Computer Science: SL/HL
The Computer Science course covers:

SL/HL Core

- System fundamentals
- Computer organization
- Networks
- Object Oriented Programming in Java

HL Extension

- Abstract data structures
- Resource management
- Control

The IB DP Computer Science course is an ideal continuation for learners taking IGCSE Computer Science although previous study is not required. It is also a fantastic course for anyone interested in computational thinking, with large amounts of hands-on practical programming, wrapped up in learning problem-solving approaches to developing algorithms.

Sports, Exercise and Health Science (SEHS): HL/SL
The SEHS course covers:

- Anatomy
- Exercise physiology
- Energy systems
- Movement analysis
- Skill in sport
- Measurement and evaluation of human performance
- Psychology of sport
- Physical activity and health
- Nutrition for sport, exercise,and health

The course incorporates the traditional disciplines of Anatomy, Physiology Psychology and Nutrition which are studied in the context of Sport, Exercise and Learners study a range of core and option topics. They undertake practical investigations in both laboratory and field settings. This provides an opportunit the knowledge and understanding necessary to apply scientific principles and criticall human performance. Where relevant, the course addresses issues of internationalism and ethics by considering Sport, Exercise and Health relative to the individual and in a global context.

Group 5: Mathematics

There are two Mathematics courses available.

IB Mathematics: Analysis and Approaches SL/HL

The course covers the five key areas of Mathematics (note the topics in italics are the additional topics required to study at the HL):

- Number & Algebra - Sequences and series, Indices and logarithms, *Permutations and combinations, Partial fractions, Complex numbers, Proof by induction*
- Functions - Equations of straight lines, Curve sketching, Definition of function, Quadratic functions, Graph transformations, *Factor and remainder theorem, Modulus function*
- Geometry and Trigonometry - Coordinate geometry, Volume and surface areas of 3D shapes, Trigonometry, Bearings, Circles, *Reciprocal trigonometric ratios, Compound angle identities, Vectors*
- Statistics and Probability - Classification of data, Sampling, Presentation of data, Measures of central tendency and dispersion, Linear correlation, Introduction to probability, Venn diagrams, Discrete random variables, Normal distribution, Binomial distribution, *Conditional probability, Regression line x on y, Bayes' Theorem, Continuous random variables*
- Calculus - Introduction to limits, differentiation of polynomials and basic trigonometric functions, equations of tangents and normal, Definite integrals, Chain, product and quotient rules, Kinematics, Indefinite integration and integration by substitution methods, Numerical methods, *Understanding of limits, Differentiation from first principles, L'Hopital's Rule, Implicit differentiation, Related rates and optimisation, Derivatives of more complex functions, Integration by parts, Volumes of revolution, First order differential equations, Maclaurin expansions*

This course is designed for students with strong ability in mathematics, who enjoy the analytical aspects of the subject. The HL course is suitable for students considering further studies in Mathematics or in related subject, such as Physics and Engineering and some Economics courses at top universities. Students commencing the HL course should have achieved a standard of Mathematics equivalent to a grade A at IGCSE and ideally an advanced Mathematics course, such as Additional Mathematics. Students commencing the HL course should have achieved a standard of Mathematics equivalent to a grade A at IGCSE and ideally an advanced Mathematics course, such as Additional Mathematics.

IB Mathematics: Applications and Interpretation SL and HL

The course covers the five key areas of Mathematics (note the topics in italics are the additional topics required to study at the HL):

- Number & Algebra - Sequences and Series, Indices and Logarithms, Approximations and solving systems of linear and polynomial equations, *Complex numbers, Matrices, Eigenvalues and Eigenvectors*
- Functions - Equations of straight lines, Curve Sketching, Modelling, *Inverse and composite functions, Transformations of functions, Linearizing data*
- Geometry and Trigonometry - Coordinate geometry, Volume and surface areas of 3D shapes, Trigonometry, Bearings, Circles, *Radians, Vectors, Graph Theory*

Suitable for students interested in social sciences, natural sciences, medicine, statistics, business engineering, social economics, psychology and design. Students commencing the HL course should have achieved a standard of Mathematics equivalent to a grade A at IGCSE and ideally an advanced Mathematics course, such as Additional Mathematics.

Group 6: Arts and Electives

Film: HL/SL

The Film course develops skills in:

- Directing
- Cinematography
- Editing
- Sound recording
- Screenwriting
- Textual analysis
- Film theory and history
- Becoming an active spectator of film

The course allows learners to develop their own interests in Global Cinema, focusing on film cultures from around the world. In addition learners explore film styles and movements from the Silent era, German Expressionism, Film Noir, Italian Neo Realism, French New Wave and Iranian neo-realist film. The central focus of the course is a practical element that includes the planning, shooting and editing of a seven-minute film individually or as part of a group.

Theatre Arts: HL/SL

The Theatre Arts course develops skills in:

- World theatre traditions
- Directing
- Devising
- Script analysis
- Reviewing live theatre performance
- A solo performance
- Theatre processes

The course gives learners an in-depth understanding of a range of many different theatre practices from around the world. Learners direct others in performance, as well as develop presentation and performance skills. The course also helps learners improve their communication skills through the study of voice and movement.

Music: HL/SL

The Music course develops skills in:

- Musical performance across a range of styles
- Musical composition in a range of genres
- Musical analysis across and range of styles
- Developing skilled and imaginative collaborators
- Expressing ideas creatively with confidence
- Critical reflections of the process of creating and experiencing music
- Evaluation and the development of critical perspectives on their own and others music

The course is designed for 21st century global musicians in a rapidly changing world and it teaches students to be able to staregise, plan, and justify creativite choices. The course is set across 4 assessment areas which include written work, composition submissions, a multimedia presentation of a real life student-led project and solo or group performances. Students who have studied GCSE level music or have completed formal practical or theory examinations would be at an advantage for taking music at HL. However, students who have secure musical skills and a strong interest in the subject can certainly succeed at HL IB Music. The subject can be accessed by any student who has an interest in music, plays a musical instrument or sings to a reasonable standard. A. Grade 5 music theory & performance or IGCSE grade B is recommended for entry to IB music.

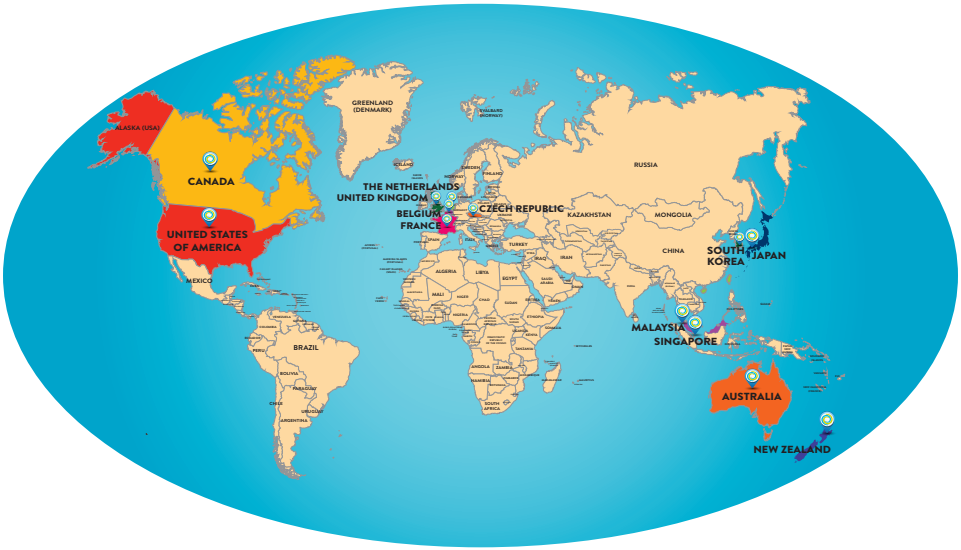
Visual Arts: HL/SL

The Visual Arts course develops skills in:

- Theoretical Practice: Investigating visual art in context, as well as ways of making and presenting art.
- Art-making Practice: Create art recording processes and techniques. Art making includes drawing, painting, printing, graphics, sculpture, designed objects, site specific artwork, textiles, time-based and sequential art, Lens media and digital/screen based artwork.
- Curatorial Practice: Develop informed responses to exhibition work whilst selecting and presenting your own resolved works.
- Visual Arts Journal: Use a journal to record all aspects of your artmaking journey, including experiments with media, research, reflections, observations and personal responses.

The course develops learners' analytical skills, problem-solving and divergent thinking, while working towards technical proficiency and confidence as art-makers. In addition to exploring and comparing visual arts from different perspectives and in different contexts, learners are expected to engage in, experiment with and critically reflect upon a wide range of contemporary practices and media.

ALUMNI UNIVERSITY DESTINATIONS
NEXUS GRADUATES AROUND THE WORLD



University Destinations

Australia
James Cook University
Monash University
University of Melbourne
University of Queensland
University of Technology Sydney
University of Western Australia

Belgium
Katholieke Universiteit Leuven

Canada
Carleton University
Emily Carr University of Art + Design
Fraser International
McGill University
Simon Fraser University
The University of British Columbia
University of Toronto

The Czech Republic
Charles University

France
The American University of Paris
L'atelier D'arts Appliqués

Hong Kong
Hong Kong University
The Hong Kong University of Science and Technology

Japan
University of Hokkaido
University of Tokyo

Korea
Korea Institute of Science and Technology

Malaysia
Heriot-Watt University
International Islamic University Malaysia
International Medical University
INTI International University
Infrastructure University Kuala Lumpur
LimKokWing University
Monash University
Multimedia University
Newcastle Medical School Malaysia
University of Nottingham
Management and Science University
Mahsa University
Penang Medical College
Southampton University
Sunway University
Taylor's University
UCSI University
UOW Malaysia KDU University College

The Netherlands
Erasmus University Rotterdam
Utrecht University
Radboud University

New Zealand
Victoria University of Wellington

Singapore
Curtin University
Nanyang Technological University
Singapore Management University

United Kingdom (UK)
Bath Spa University
Birkbeck University
City University London
Durham University
Heriot Watt University
Imperial College London
Keele University
King's College London
Lancaster University
London School of Economics
Loughborough University
Manchester Metropolitan University
Nottingham Trent
Oxford University
Salford University
School of Oriental and African Studies
University of London
University Academy 92
University of Aberdeen
University of Bath
University of Brighton
University of Bristol
University College London
University of East Anglia
University of Edinburgh
University of Glasgow
University of Leicester
University of Liverpool
University of Manchester
University of Nottingham
Queen Mary University of London
University of Reading
University of St. Andrews
University of Sussex
University of Southampton
University of Warwick
University of Westminster
University of York

United States of America (USA)
Boston University
Duke University
Johns Hopkins University
Northeastern University
Stanford University
Syracuse University
University of California, Berkeley
University of California, Los Angeles
University of Illinois
University of Minnesota Twin Cities
University of Pennsylvania
Washington State

NEXUS
INTERNATIONAL
SCHOOL
MALAYSIA

enquiry@nexus.edu.my
T: +603 8889 3868
www.nexus.edu.my

Member of Taylor's Education Group