



**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

Being Dedicated to a Culture of **Respecting** and Caring for Each Other  
Openness in **Excellence**  
Acting with **Communication**  
Being **Integrity** in What We Do  
Creating **Passionate** Environment  
**Enjoyable**

## 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.

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## 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.

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 M'Crorie**  
**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 Circle 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 elect to take another subject instead of an Arts if their chosen career path demands this eg. medicine requires 2 sciences. 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 grades in the region of 5Bs at IGCSE. 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 opportunity 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.





# 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.

## Social and Emotional Guidance

A full-time trained counselor assists learners develop the life skills necessary to cope with the challenges they may face. Learners are welcome to drop in to the Counsellor's office for a chat or make an appointment. Confidentiality is respected and learners can expect that their issues will be dealt with in a non-judgmental, professional and respectful manner.

## 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 + Literature; Malay A; Chinese A	Language A: English Language + Literature; Malay A or Self-taught; Chinese A
2	Language B: Mandarin; English; French; Spanish	Language B: Malay; Mandarin; French; Spanish; English* or Ab Initio; French and Mandarin
3	Geography; History; Economics; Business Management; Computer Science; Psychology	Geography; History; Economics; Business Management; Computer Science; Psychology
4	Biology; Chemistry; Physics; Sports, Exercise and Health Science (SEHS)	Biology; Chemistry; Physics; Sports, Exercise and Health Science (SEHS)
5	Mathematics	Mathematics
6	Visual Arts; Film; Theatre Arts; or an additional Science or Humanities subject	Visual Arts; Theatre Arts; Film; or an additional Science or Humanities subject

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

### Group 2 additional information

English 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 + 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.

## 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 opportunities 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.

## 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 B

**Malay, Mandarin, French, Spanish and English: HL/SL**

**The Language B course covers:**

- Communications and media
- World issues
- Social relationships

**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:**

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 and 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.

### 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 Biology course covers:

- Cell biology
- Molecular biology
- Genetics
- Ecology
- Evolution
- Human physiology
- Plant physiology

The course develops learners' deeper understanding of the structure and function of the body, its design through genetics and evolution and how all species interdepend to create the living world. The course will enable learners to appreciate how current scientific knowledge has developed in a global context and to develop the skills required for scientific investigation.

### Chemistry: HL/SL

#### The Chemistry course covers:

- Quantitative chemistry
- Atomic structure & bonding
- Energetics, kinetics & equilibria
- Oxidation & reduction processes
- Organic chemistry
- Biochemistry & medicinal chemistry

The course develops learners' deeper understanding of chemical processes, enabling them to explain many different chemical interactions. The course will enable learners to appreciate how current scientific knowledge has developed in a global context and to develop the skills required for further scientific progress.

### Computer Science: SL/HL

#### The Computer Science course covers:

##### SL/HL Core

- System fundamentals
- Computer organization
- Networks
- Computational thinking, problem-solving and programming

##### HL Extension

- Abstract data structures
- Resource management
- Control

In addition, there are optional components that all learners get to choose from, such as databases and modelling and simulation.

The IB DP Computer Science course is an ideal continuation (but it is not essential to have studied it before) for learners taking IGCSE Computer Science. 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.

## Physics: HL/SL

### The Physics course covers:

- Mechanics
- Thermal physics
- Waves
- Electricity and magnetism
- Circular motion and gravitation
- Atomic, nuclear and particle physics
- Energy production

The course develops learners' appreciation of the universe from the smallest particles to the vast distances between galaxies. They will examine classical physics and how ideas and theories have developed throughout history and deepened understanding of the world. Learners will use and develop the same scientific processes as those carried out by scientists of the past, and develop their ability to theorise about phenomena.



## 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, Biomechanics, Psychology and Nutrition which are studied in the context of Sport, Exercise and Health. Learners study a range of core and option topics. They undertake practical (experimental) investigations in both laboratory and field settings. This provides an opportunity to acquire the knowledge and understanding necessary to apply scientific principles and critically analyse 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, enjoying 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 SL course should have achieved a standard of Mathematics equivalent to a grade B at IGCSE.

### 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.



## 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

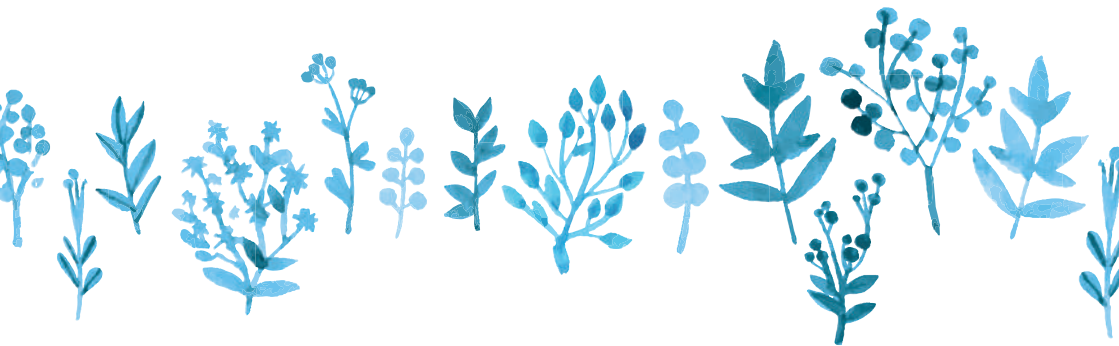
The course allows learners to develop their own interests in Global Cinema, focusing on film cultures from around the world. In addition learners explore film styles and movements from the Silent era, German Expressionism, Film Noir, Italian Neo Realism, French New Wave and Iranian neo-realist film. 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.





## Visual Arts: HL/SL

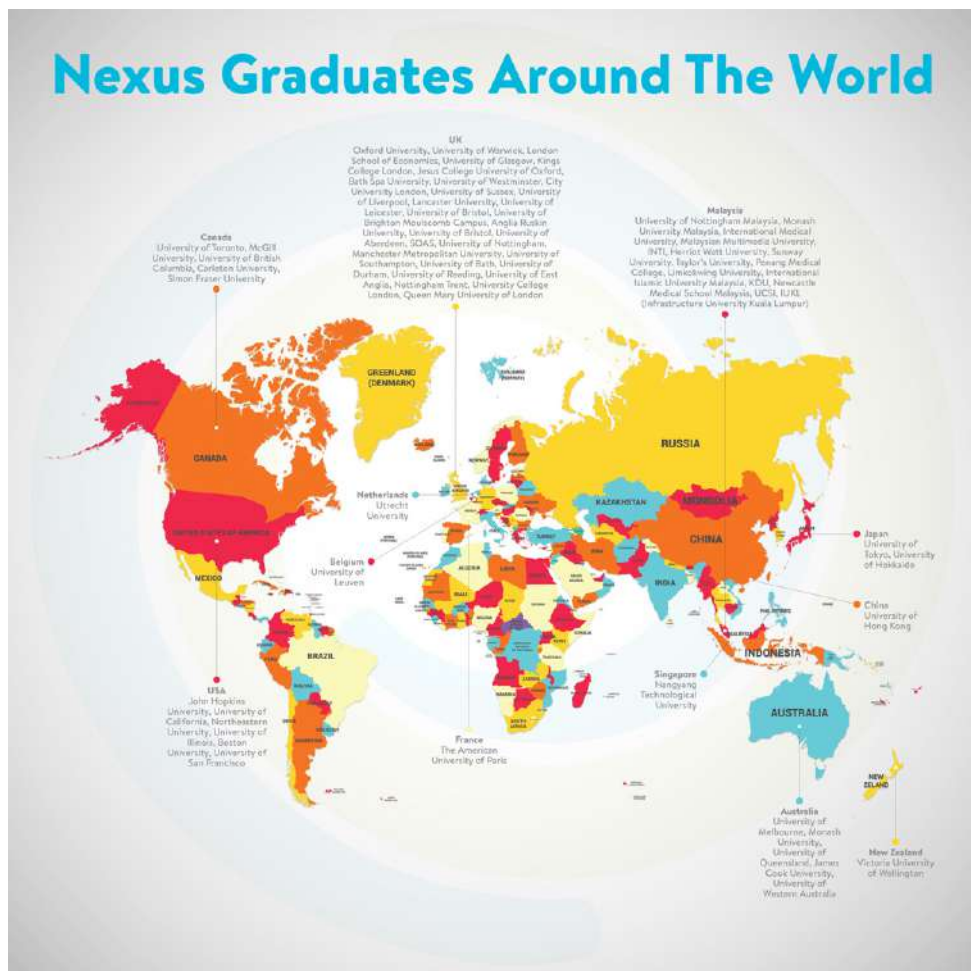
### The Visual Arts course develops skills in:

- 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 2013-2018



### Courses studied include:

Medicine, Sociology, Business Management & Finance, Marine Biology, Philosophy, Politics & Economics, English Language and Creative Writing, Politics and International Relations, International Relations and World Philosophy, Speech Language and Therapy, Computer Science, Law, Art, Finance and Accounting, Anthropology, Film, Economics, Urban Planning & Political Science, Material Science and Engineering, Psychology, Business, International Business, Aerospace, Interior Design, Business Administration, Environmental Science, Chemical Engineering, Mass Communications, Real Estate Finance, Game Art Design, International Studies.

**Notes:**



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