LIVING
ACADEMY

International Baccalaureate Handbook

The first IBDP school on the North Coast

Important information about the International Baccalaureate Diploma Programme at Living School's LIVING ACADEMY

Inquirers, Knowledgeable, Thinkers, Communicators, Principled, Open-minded, Caring, Risk-takers, Balanced, Reflective.

What is the IB Diploma?

The IB Diploma Programme is a comprehensive pre-university two-year curriculum course of study designed for students in the 16 to 19 age range. It is a broad-based two-year course that aims to encourage students to be knowledgeable and inquiring, but also caring and compassionate. There is a strong emphasis on encouraging students to develop intercultural understanding, open-mindedness, and the attitudes necessary for them to respect and evaluate a range of points of view.

The IB Diploma Programme is widely recognised by the world's leading universities. The program is unique in that it is based on no particular national education system, but is a deliberate balance between breadth and the specialisation which is required by many universities. The Diploma Programme prepares students for university and encourages them to develop:

- Critical thinking and analysis skills
- An international mindedness necessary to live and work in a global community
- An understanding of global issues and a concern for others in our community and the broader world
- A strong sense of their own identity and culture
- A balanced education for the 'whole' student
- An extensive knowledge and skill base in preparation for university and adult life.

Follow this link for more information about the IB Diploma: *https://www.ibo.org/en/programmes/diploma-programme/*

Living Academy's Reasoning

- A thorough foundation for the skills and knowledge expected at entry in the IB Diploma Programme
- Challenges which stimulate student motivation and learning
- High level learning – critical thinking and open ended questions
- Balanced development of the whole person – academic, creative and cultural
- Global understanding
- Effective use of information technology to enhance learning
- Attributes required for success in the Diploma Programme linked to our VAST learning lens:
  - Active responsibility for own learning
  - Organisation and time management
  - Research skills
  - Cooperative learning and open-mindedness.

The IB Diploma Curriculum

The curriculum is modelled by a Diploma Curriculum Framework with six academic areas surrounding the three core requirements.

Over the course of the two-year program, students:

- Study six subjects chosen from the six subject groups
- Complete an Extended Essay
- Follow a Theory of Knowledge course (TOK)
- Participate in Creativity, Activity, Service (CAS).

Normally students' study loads comprise:

- Three of the six subjects are studied at Higher Level (courses representing 240 teaching hours)
- The remaining three subjects are studied at Standard Level (courses representing 150 teaching hours).

The International Baccalaureate has set very clear guidelines and regulations that students must achieve in order to receive the Diploma qualification. An Executive Summary is provided on Page 8 to inform parents and students of these requirements.

The Diploma Curriculum Framework

At Living Academy, we align strongly with the Diploma's emphasis upon international-mindedness. This stands firmly in line with our vision for our graduates to have an understanding of global issues and a concern for others in our community and the broader world. The IB believes that students must also develop an understanding of their own cultural and national identity. For this reason, all students study two languages. We believe the IB Diploma Programme will assist students in developing the skills they need to live and work in an international context which is essential for life in the 21st Century. It provides a balanced education for the 'whole' student and provides excellent preparation for both university and adult life.

The Living Academy (SCU campus) teaches the program in English. Within the program, there are a wide range of courses designed to meet the interests and requirements of different students. These include the Creativity, Activity, Service (CAS) program, the Extended Essay and the Theory of Knowledge (TOK) courses. Together, these offer IB Diploma students experiences and skills they will not find in other programs. At Living Academy, these are further complemented by a range of extension and enrichment opportunities along with advanced standing possibilities with Southern Cross University.

Universities respond positively to IB Diploma graduates because the curriculum develops a balanced variety of skills. IB Diploma graduates, with the range of subjects they have studied, have a greater choice of undergraduate programs. Many colleges and universities have developed their own recognition policies. The individual policies vary greatly, but they all have one thing in common; through their policies, these institutions make it apparent that they understand and appreciate the Diploma Programme graduate and the rigour of the Diploma Programme itself. *http://www.ibo.org/en/university-admission/*

The Core of the Diploma Curriculum Framework

All Diploma Programme students participate in the three course requirements that make up the core of the Diploma Curriculum Framework. Reflection on all these activities is a principle that lies at the heart of the thinking behind the Diploma Programme.

The Theory of Knowledge (TOK) course encourages students to think about the nature of knowledge, to reflect on the process of learning in all the subjects they study as part of their Diploma Programme, and to make connections across the academic areas.

The Extended Essay (EE), a substantial written work of up to 4,000 words, enables students to investigate a topic of special interest that they have chosen themselves. It also encourages students to develop the skills of independent research that will be expected at university.

Creativity, Activity, Service (CAS) involves students in experiential learning through a range of artistic, sporting, physical and service activities.

The IB Mission, the Living Academy Vision & the IB Learner Profile

The International Baccalaureate is more than its educational programmes. At its heart, it is motivated by a mission to create a better world through education.

The IB values its hard earned reputation for quality, for high standards and for pedagogical leadership. The IB achieves goals by working with partners and by actively involving stakeholders, particularly teachers.

The IB promotes intercultural understanding and respect, not as an alternative to a sense of cultural and national identity, but as an essential part of life in the 21st century. All of this is captured in the IB mission statement.

The International Baccalaureate 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 students across the world to become active, compassionate and lifelong learners who understand that other people, with their differences, can also be right.

Living School Statement of Purpose

Living School is different – we view the future through a progressive lens. Living School cares to teach, challenge and nurture good people for a sustainable future. Living School is a community where children learn; Teaching is untethered; Parents connect; and a community thrives.

We define our focus on 'sustaining' - as regenerating: for sustaining our current practices will not safeguard the same opportunities we enjoy for our future generations. We believe every person has a responsibility to regenerate - to be the change we need. Our quest is to nurture conviction. HalveIT - halving our impact in seven key areas: Water, Waste, Wellness, Pollution, Energy, Environment, Food, is our unique approach to educate and guide best practices in environmental custodianship. We respect first nation people's cultures and practices. We consider technology as an asset for positive change.

- We emphasise and model positive relationships.
- We focus on the learning process: forming connections to ponder the bigger picture; mastering concepts to understand with confidence; and learning in context to experience the aha moment via application.
- We engage in transdisciplinary and project-based learning to resolve a KeyStone question.
- We aim to make school inspirational & engaging.
- We adopt student agency purposefully.
- Living School celebrates our connection to nature and the environment via excursions, onland learning and expeditions.
- Living School explicitly guides learners to develop a deep understanding of VAST universal qualities for success.
- Living Academy is the final Learning Neighbourhood of Living School, expanding on our Middle School (5-8) and Primary School (K-4).

International Baccalaureate Diploma Regulations
Executive Summary for Parents and Students

A student must engage in the full program of subjects from each of the six (6) groups. IB does allow some specific variations.

- A student must also complete requirements of
  - CAS – Creativity, Activity, Service
  - EE – Extended Essay
  - TOK – Theory of Knowledge

Higher Level / Standard Level Subjects

- Of the six subjects studied, a minimum of three (3) must be studied at Higher Level and the remainder at Standard Level. A maximum of four (4) can be taken at Higher Level.
- The difference in Higher / Standard Level is the number of teaching hours:
  - Higher Level – 240 hours per course
  - Standard Level – 150 hours per course
- Different Subject courses differentiate between the HL / SL in different ways to achieve this. Examples include:
  - Core standard course in both with additional topics in HL.
  - The same topics in each but covered to a different depth.
  - Differing assessment requirements.

Subject Gradings

- Achievement in each subject is rated from 1 to 7.
- HL / SL subjects are treated the same in the contribution to the total diploma score.
  i.e. A 6 rating in an SL subject is not worth less than a 6 rating in the equivalent HL subject.
- A maximum score of 45 can be achieved in a diploma.

6 subjects x 7 score	=	42 points
TOK + Extended Essay (See Diploma Points Matrix)		3 points
		45 points

Achieving the Diploma

A diploma will be awarded to a candidate subject to the conditions below.

1. CAS requirements have been satisfied.
2. Candidate's total points are at least 24.
3. An N has not been given for Theory of Knowledge, Extended Essay or for a contributing subject.
4. No grade of E has been awarded for one or both of Theory of Knowledge and the Extended Essay.
5. No grade of 1 awarded in any subject / level.
6. Grade of 2 has been awarded less than three (3) times (HL or SL).
7. Grade of 3 or below has been awarded less than four (4) times (HL or SL).
8. Candidate has gained at least 12 points on HL subjects (for candidates who register for four (4) HL subjects, the three (3) highest grades count).
9. Candidate has gained at least 9 points on SL subjects (candidates who register for two (2) SL subjects must gain at least 5 points at SL).

Theory of Knowledge/Extended Essay Matrix

A grade of E in EITHER Extended Essay OR Theory of Knowledge is a failing condition and therefore the student will not be awarded the IB Diploma.

TOK & EE	A	B	C	D	E
A	3	3	2	2	Failing condition
B	3	2	2	1	
C	2	2	1	0	
D	2	1	0	0	
E	Failing condition				

Examination Results

Examination results are available in early January following the November IB Examination Session. If requested by the student, results are made available to universities either in electronic format or as a transcript of grades, as appropriate. The results indicate the grade a candidate has been awarded for each subject, including the additional Diploma requirements of Theory of Knowledge and the Extended Essay. The results also indicate the completion of Creativity, Activity, Service (CAS) and total number of points for the Diploma, if a Diploma has been awarded.

If a Diploma is not awarded, a student will not be awarded a UAC Selection Rank based on their IB score. Other pathways may be explored on an individual case basis with support from the Guidance Officer. Alternatively, IB offers a retake opportunity:

1. Retake

A student can retake an IB exam or an Internal Assessment for most assessment pieces. In most cases the student would only need to retake the part in which they were not successful. This occurs in the following year's May IB Examination Session. Registration for a retake must be lodged by a school with IB by 15 January that year. A student would have to request this in writing to be received by the Director at Living Academy by 13 January that year.

Conditions

1. Retake exams are at a cost to the student of approximately $SGD178 per subject.
2. The student would be required to prepare for this retake independently and would not be re-enrolled as a student at Living Academy, e.g. participating in classes.
3. Living Academy would make textbooks available through special loan provisions.
4. The student would sit the exam at Living Academy on the date and time indicated in the IB Examination Calendar.

2. Enquiry Upon Results - Only Applies to External Assessment

If a student has concerns about their result for a particular subject, it may be possible to request a re-mark by IB. However, a candidate's grade may be lowered or raised as a result of a Category 1 Enquiry Upon Result (EUR).

The following condition must be satisfied:

- The candidate must pay costs associated with an Enquiry – approximately $SGD146 per candidate/ subject.

Such a request must be made in writing to the Director by 15 March of the year the results were released to allow for discussion and planning regarding maximising the best option. If the result is improved, there is no charge.

Note:

Requests for 'Enquiry upon Results' service will only be accepted by the IB from schools, not from individual candidates. In this case, the externally assessed components of a candidate's work are normally re-marked by a senior examiner.

The International Baccalaureate Diploma and the HSC

Our students' pathway allows them eligibility for only the IB Diploma Program qualifications after completing Year 12 or Y13.

- IB Organisation (IBO) issues the IB Diploma, whereas The New South Wales Education Standards Authority (NESA) issues the HSC.
- The IB sends the results obtained in the Diploma Programme directly to NESA for HSC eligibility calculations.
- IB Diploma candidates do not receive an ATAR. If you're a NSW or ACT IB student, UAC will provide you with an IB Admissions Score based on your IB overall score. Then, when you apply for university through UAC, your IB Admissions Score will convert to a UAC rank, which is assessed as equivalent to an ATAR.
- There are set criteria for obtaining the IB Diploma and separate criteria for the HSC. In most cases if a student achieves the IB Diploma they will achieve the equivalent of the HSC. A student may receive the IB Diploma, but not the HSC.
- All students will receive a Record of School of Attainment (ROSA) from NESA if they leave their final years of schooling, and have met all of the attendance and assessment requirements, without completing their HSC or IB Diploma.
- The International Baccalaureate (IB) is an alternative education pathway and is standardised across the globe. As of February 2024, there were over 8,000 programmes being offered worldwide, across over 5,700 schools in 160 countries. It offers four high-quality programs for students in their primary years and middle years, and career-related certificate and diploma programs for senior students at the equivalent stage of those doing the HSC.
- The IB Diploma Program is a rigorous pre-university course of studies, leading to examinations, which meets the needs of secondary school students in Years 11 and 12. Designed as a comprehensive two-year curriculum that allows its graduates to fulfil requirements of various national education systems, the diploma model is designed to address the intellectual, social, emotional and physical wellbeing of students.
- IB Diploma Program students must choose one subject from each of five groups (1 to 5), ensuring breadth of knowledge and understanding in their best language, additional language(s), the social sciences, the experimental sciences and mathematics. Students may choose either an arts subject from group 6, or a second subject from groups 1 to 5. In addition to disciplinary and interdisciplinary study, the Diploma Program features core elements that broaden students' educational experience and challenge them to apply their knowledge and skills. These include a Theory of Knowledge course on critical thinking, an extended independent research-based essay, participation in a range of community service activities, engagement in the arts, and development of a healthy lifestyle through physical activity.
- The results scale for the IB diploma is different from the HSC, with the top mark being a total of 45.
- From each student's IB diploma results, the Universities Admissions Centre (UAC) calculates a UAC rank, which is comparable to the ATAR. In Australia, a result of 45, depending om grade boundaries) calculates to a UAC rank of between 99.80 to 99.95. For a number of students, the IB Diploma Program is an excellent alternative to the HSC, offering a clearly globally transferable index of achievement for students looking to continue further studies both in Australia & overseas.

Subject comparisons IB DP to the NSW HSC

To find a comparison between the subject choices please go to https://uac.edu.au/assets/documents/international-baccalaureate/ib-subject-comparison.pdf

University Recognition of IB Diploma

Students who obtain minimum grades for selected IB subjects will be eligible for Advanced Standing recognition to access subject credits at university. Australian and international universities all have individual arrangements regarding IB recognition. Please refer to each university for their arrangements or review arrangements summaries on the IBO website.

International Baccalaureate Recognition

For information about IB Recognition refer to: *https://recognition.ibo.org/en-US/*

How are IB Diploma students considered for entry to tertiary courses in Australia?

Results from the IB Diploma, are converted into an ATAR-equivalent value to allow IB students to be considered for tertiary places alongside their counterparts who have completed state curricula. This value is known as the IBAS (International Baccalaureate Admission Score). Scaled total marks from all subjects will be used to differentiate between IB students on the same IB score. This means that IB students can apply in any Australian state or territory with confidence about how their results compare to their peers who have completed state curricula and received an ATAR. For more information regarding IBAS calculations please refer to: *https://www.uac.edu.au/future-applicants/admission-criteria/ib-applicants*

IBAS	Rank	IBAS	Rank	IBAS	Rank	IBAS	Rank
45.75	99.95	40.25	97.05	34.75	90.45	29.25	79.50
45.50	99.95	40.00	96.80	34.50	90.15	29.00	78.95
45.25	99.85	39.75	96.55	34.25	89.65	28.75	78.35
45.00	99.80	39.50	96.35	34.00	89.20	28.50	77.80
44.75	99.75	39.25	96.05	33.75	88.75	28.25	77.20
44.50	99.70	39.00	95.80	33.50	88.30	28.00	76.65
44.25	99.55	38.75	95.55	33.25	87.80	27.75	76.10
44.00	99.45	38.50	95.30	33.00	87.30	27.50	75.55
43.75	99.35	38.25	95.00	32.75	86.80	27.25	74.90
43.50	99.25	38.00	94.75	32.50	86.30	27.00	74.25
43.25	99.10	37.75	94.50	32.25	85.80	26.75	73.60
43.00	99.00	37.50	94.25	32.00	85.30	26.50	73.00
42.75	98.90	37.25	93.90	31.75	84.80	26.25	72.30
42.50	98.80	37.00	93.55	31.50	84.30	26.00	71.60
42.25	98.60	36.75	93.20	31.25	83.80	25.75	70.90
42.00	98.45	36.50	92.85	31.00	83.35	25.50	70.25
41.75	98.30	36.25	92.50	30.75	82.85	25.25	69.65
41.50	98.15	36.00	92.15	30.50	82.40	25.00	69.05
41.25	97.90	35.75	91.80	30.25	81.80	24.75	68.45
41.00	97.70	35.50	91.50	30.00	81.25	24.50	67.85
40.75	97.50	35.25	91.15	29.75	80.65	24.25	67.10
40.50	97.30	35.00	90.80	29.50	80.10	24.00	66.35

(from August 2023; https://www.uac.edu.au/future-applicants/admission-criteria/ib-applicants

Criteria for receiving a UAC Rank without an IB Diploma

If you have undertaken the full IB Diploma Programme, or were a Retake candidate, but did not meet requirements for the award of the IB Diploma, you will receive a UAC Rank if you meet the following criteria.

- You have undertaken the full IB Diploma Programme or were a Retake candidate.
- You have received a combined score of 20 or more total points.
- You have undertaken Theory of Knowledge, Extended Essay and at least six HL/SL subjects.
- You have not received the grade 'N' or 'P' for any subject or result, including award status and TOK/EE matrix points.

***Note**: Some institutions will not consider you for admission unless you have been awarded the IB Diploma, or will not use your UAC Rank based on the above criteria as part of its admission process. Check with the admissions officers of participating institutions for further information.*

Prerequisites for Tertiary Entry

- Prerequisites are subjects that must be studied and passed at a senior level (final years of the Academy) to be eligible to apply for entry into specific tertiary degrees
- Prerequisites may include: English, Mathematics and/or one or more of the Sciences
- All students in the year preceding their final two-years of secondary schooling will be given the links to the latest UAC Prerequisite Documents to assist in their subject selection process.

Mathematics, Science and Tertiary Study

Students need to make informed choices about whether to choose Mathematics: Analysis and Approaches or Mathematics: Applications and Interpretation in their IB studies program and whether to include a science. This decision needs to be based on:

- Previous academic results and progress in Mathematics and Science
- Meeting prerequisite requirements for tertiary study.
- Queensland Universities will accept either Mathematics: Analysis and Approaches at SL to be equivalent to Maths Standard. All other states will only accept Mathematics: Analysis and Approaches at HL to be equivalent to Maths Extension.

Meeting Prerequisite Requirements

Please refer to *https://www.uac.edu.au/assets/documents/year-10/year-10-booklet-2026.pdf* to access the Year 10 Guide publications for NSW/ACT Universities which outlines prerequisite requirements.

Mathematics HL is not a pre-requisite for any course; however, it is recommended that students refer to the UAC prerequisite requirements identified in the above link. If Mathematics: Analysis and Approaches SL/HL is listed as a prerequisite this means that Mathematics: Analysis and Approaches SL must have been studied and passed (4 or higher) to be eligible to apply to these courses. The level of the Science subject studied need only be SL to meet prerequisite levels. Please contact a Guidance Officer if you have any questions.

SUBJECT Comparison IB Diploma to HSC (based on 2018 UAC data)

IB subject	NSW HSC subject
ENGLISH (GROUP 1)	
English A: Language and Literature - SL	English Standard English
English A: Language and Literature - HL	Advanced English Studies
Literature and Performance - SL	
MATHEMATICS (GROUP 5)	
Mathematics: Application and Interpretations (SL)	Mathematics Standard
Mathematics: Analysis and Approaches (SL)	Mathematics Extension
Mathematics: Analysis and Approaches (HL)	Mathematics Extension
SCIENCE (GROUP 4)	
Biology (SL/HL)	Biology
Chemistry (SL/HL)	Chemistry
Physics (SL/HL)	Physics
Environmental Systems & Societies (SL)	Earth and Environmental Science
Design and Technology*	Design Technology
INDIVIDUALS AND SOCIETIES (GROUP 3)	
History (SL/HL)	Modern History Ancient History
Sports, Exercise and Health Science (SL)	PDHPE
THE ARTS (GROUP 6)	
Design Technology	Design Technology
Visual Arts	Visual Arts
Theater	Drama
Music	Music

IB Core

Core Requirement Completion, Grades and three (3) Possible Bonus Points

IB Diploma candidates must successfully complete all three core requirements.

- Creativity, Activity, Service (CAS)
- Extended Essay (EE)
- Theory of Knowledge (TOK)

While CAS achievement is monitored, a final grade is not awarded. EE and TOK receive grades from A to E.

The award of the three (3) possible bonus points is determined by the intersection of EE grades and TOK grades on a matrix. For example, the attainment of “A” grades in both EE and TOK, would result in the award of the full extra three points. See the Core Requirement Matrix below.

Theory of Knowledge / Extended Essay Matrix

TOK & EE	A	B	C	D	E
A	3	3	2	2	Failing condition
B	3	2	2	1	
C	2	2	1	0	
D	2	1	0	0	
E	Failing condition				

IB Core – Theory of Knowledge

Course Focus and Outcomes

TOK explores questions about knowledge and the process of knowing. TOK emphasises comparisons and connections between areas of knowledge and encourages students to become more aware of their own perspectives and the perspectives of others. In TOK, students reflect on the knowledge, beliefs and opinions that they have built up from their years of academic studies and their lives outside the classroom. The course is intended to be challenging and thought-provoking—as well as empowering—for students.

This course will enable students:

- to encourage students to reflect on the central question, "How do we know that?" and to recognise the value of asking that question
- to expose students to ambiguity, uncertainty and questions with multiple plausible answers
- to equip students to effectively navigate and make sense of the world, and help prepare them to encounter novel and complex situations
- to encourage students to be more aware of their own perspectives and to reflect critically on their own beliefs and assumptions
- to engage students with multiple perspectives, foster open-mindedness and develop intercultural understanding
- to encourage students to make connections between academic disciplines by exploring underlying concepts and by identifying similarities and differences in the methods of inquiry used in different areas of knowledge
- to prompt students to consider the importance of values, responsibilities and ethical concerns relating to the production, acquisition, application and communication of knowledge.

TOK is based on the development of specific skills:

- Identifying knowledge claims (what is thought to be true)
- Identifying knowledge questions (the questions that arise from these claims)
- Finding links between knowledge theories and the questions that arise from issues being explored
- Providing examples that support and counter observed knowledge questions and claims
- Applying analytical skills (including critical thinking, reflective line of inquiry, accepting ambiguity, open ended questioning, connectedness, relevance, problem solving, collaborating, synthesis, and deconstruction).

Assessment

Essay

The TOK essay engages students in a more formal and sustained piece of writing in response to a title focused on the areas of knowledge. The essay is an external assessment component; it is marked by IB examiners. The essay must be a maximum of 1,600 words and must be on one of the six prescribed titles issued by the IB for each examination session.

Exhibition

The TOK Exhibition assesses the ability of the student to show how TOK manifests in the world around us. The exhibition is an internal assessment component; it is marked by the teacher and is externally moderated by the IB. For this task, students are required to create an exhibition of three objects that connect to a prompt provided to the student. They must also submit an accompanying written commentary on each object of 950 words total.

IB Core – Extended Essay

Course Focus and Outcomes

The Extended Essay is an in-depth study of a focused topic chosen from the list of approved Diploma Programme subjects—normally one of the student's six chosen subjects for the IB Diploma. It provides students with an opportunity to engage in personal research in a topic of their choice, under the guidance of a supervisor (a teacher in the school). This leads to a major piece of formally presented, structured writing, in which ideas and findings are communicated in a reasoned and coherent manner, appropriate to the chosen subject. Students begin the research process during the first year and submit in the second year of IB study.

This compulsory independent research project will enable students to:

- Pursue independent research on a focused question that relates to an area of interest.
- Develop research and communication skills.
- Develop the skills of creative and critical thinking.
- Engage in a systematic process of research appropriate to the subject.
- Experience the excitement of intellectual discovery.
- Complete a planning and progress form.

Assessment

Essay

- The 4000 word essay is graded on a scale of A – E
- The essay is marked according to criteria set out in the IB Guidelines
- The essay is externally assessed and, in combination with the grade for Theory of Knowledge, contributes up to three points to the total score for the IB Diploma. (Refer Matrix p.13)

Viva Voce

- This oral assessment is a 10 minute interview with the Supervisor after final submission to clarify any issues, confirm ownership and reflect on what has been learned. It is an aid to the Supervisor's Report.

Please note: Extended Essay supervisors are permitted to give a maximum of 5 hours individual assistance to each student. A grade of E on the Extended Essay means a failure of the IB Diploma. It is therefore imperative that students closely follow the timelines and guidelines in the Extended Essay handbook published by the Extended Essay coordinator and respond promptly to advice from supervisors.

IB Core – CAS

Course Focus and Outcomes

CAS is at the heart of the Diploma Programme and complements a challenging academic program in an holistic way, providing opportunities for **self-determination, collaboration, accomplishment** and **enjoyment**. CAS enables students to grow as unique individuals through experiential learning, and to understand they are members of local and global communities with responsibilities towards each other and the environment.

At Living Academy we are passionate about the vital role creative thinking plays in society through expressing ideas, developing empathy, giving a voice to the voiceless, advocating for change, and defining culture and identity. By connecting and aligning Service with our creative identity, we discover a sense of purpose and value extending far beyond our time at Living Academy.

The Three Strands of CAS are:
Creativity—exploring and extending ideas leading to an original or interpretive product or performance
Activity—physical exertion contributing to a healthy lifestyle
Service—collaborative and reciprocal engagement with the community in response to an authentic need

Learning Outcomes

To complete their CAS program, students are **required to achieve** the seven CAS learning outcomes comprising:

- Identify own strengths and develop areas for growth
- Demonstrate that challenges have been undertaken, developing new skills in the process
- Demonstrate how to initiate and plan a CAS experience
- Show commitment to and perseverance in CAS experiences
- Demonstrate the skills and recognise the benefits of working collaboratively
- Demonstrate engagement with issues of global significance
- Recognise and consider the ethics of choices and actions

Reflection

Being reflective is one attribute of the IB learner profile: "We thoughtfully consider the world and our own ideas and experience. We work to understand our strengths and weaknesses in order to support our learning and personal development."

Reflection leads to improved problem solving, higher cognitive processes and greater depth of understanding in addition to exploring how CAS experiences may influence future possibilities. **Purposeful, authentic reflection is about quality rather than quantity.** Students should include reflections in their CAS portfolio that give evidence to achieving each of the seven CAS learning outcomes.

Reflections in CAS may be expressed through a paragraph, a letter, a poem, a comic strip, a dramatic performance, a song, a drawing, a dance, a video journal or other forms of expression. **The appropriate occasion, amount and method is the student's decision.**

Recognition

Students who demonstrate outstanding passion and commitment to CAS, particularly through Service, are recognised each year. CAS is becoming increasingly recognised by universities when considering scholarship awards, as they value the holistic development of the individual and the sense of civic and social responsibility CAS fosters. The student's CAS portfolio provides a rich testament to this and may be used as part of an application process or curriculum vitae.

Students are expected to share and demonstrate their CAS accomplishments with the Living Academy community through assembly presentations, newsletter articles and (via marketing) in social media publications.

Creating a Personal CAS Plan

The CAS plan must:

- Include at least one substantial leadership project of over 1 month duration which addresses one or more strand of CAS
- Include enough sustained CAS experiences/activities (**at least five** are recommended in addition to the project) to authentically achieve and reflect on each of the Learning Outcomes at least once
- Use the **CAS stages** (investigation, preparation, action, reflection and demonstration) as a framework for CAS experiences and the CAS project
- Demonstrate a reasonable balance across all three strands of CAS
- Be sustained for **at least 18 months** to demonstrate commitment, perseverance and a growth mindset
- Must have a responsible adult supervisor for each activity/project who is not a relative and who can provide a report on participation

CAS Requirements

- Create a CAS proposal and personal profile at the end of Year 10 (or Y11) and submit to the CAS Advisor for approval.
- Enter the CAS plan in your **ManageBac Portfolio**. All activities and projects must have a detailed description of student involvement and specific responsibilities and identify CAS strands and Learning Outcomes addressed.
- Complete and upload authentic Reflections on your involvement in CAS, addressing the nominated Learning Outcomes for each experience/project.
- Gather and upload rich Evidence of participation and completion of each experience/project. Guidelines are in the CAS checklist.
- Attend monitoring meetings with Connect Teacher over the 18-month CAS program. These will occur at the end of Semesters 1 & 2 in IB1, at the end of Terms 1, 2, 3, 4 and at the CAS sign-off in Term 5 IB2.
- Participate in three CAS interviews with your Advisor – one at the beginning of the program, one at the end of Year 11 (or Y12) and a final interview upon completion of CAS.

Year 10 SEED Program

In Year 10, students engage in a Year 10 SEEDProgram designed to build skills for the Diploma and to experience their selection of subjects to confirm their IB course. Throughout the Year 10 course, students develop skills to meet the IB Programme requirements in each subject. They study their Diploma over two years, commencing in Year 11.

Year one						Year two						Year three					
1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
			SEED programme. Year 10 (or Y11)			IB 1 Assessment Wisdom						IB 2 High Stakes Summative				SWOT Vac Tutorials **Final Exams**	

In the Year 10 program, students study the six subjects that align to the IB subjects.

Year 10 Course – students select one subject from each group	
Studies of Language & Literature	English
Language Acquisition	French or Spanish
Individuals & Societies	Business & Management, Geography, History or Digital Studies.
Sciences	Design Technology, Science (leading towards Chemistry/ Biology/Physics/ESS), Sport/PDHPE (leading to SEH)
Mathematics	Mathematics (Leading towards Applications and Interpretation or Analysis and Approaches)
The Arts	Music, Theatre, Visual Art, Design and Technology
Introduction and cultivation for TOK, CAS, Extended Essay	
NB: Students may select: • 2 x Science subjects in lieu of a Group 6 subject ***OR*** • 2 x Arts subjects (must then study Science/ESS in Group 3)	

Senior Education & Engagement Direction (SEED) Plan

In Term 4, students participate in a three-term program to prepare their Senior Education Engagement Plan whereby course decisions are made to confirm best options for their three Higher Level and three Standard Level subjects.

Ready	Focuses on learning about yourself, knowing your strengths and celebrating your uniqueness.
Set	Supports you to locate career information, access resrouces and understand the value and role of work.
Go	Begin exploring future pathways. Includes Future Pathways Day, completing a SET Plan and subject confirmation.

Student SEED Plans are discussed between the student, family and the IBL teacher at a meeting held in Term 3.

Diploma Programme

International Baccalaureate Diploma Programme Subject Brief

Language A: language and literature

First assessments for SL and HL—2021

I. Course description and aims

The language A: language and literature course aims at studying the complex and dynamic nature of language and exploring both its practical and aesthetic dimensions. The course will explore the crucial role language plays in communication, reflecting experience and shaping the world, and the roles of individuals themselves as producers of language. Throughout the course, students will explore the various ways in which language choices, text types, literary forms and contextual elements all effect meaning.

Through close analysis of various text types and literary forms, students will consider their own interpretations, as well as the critical perspectives of others, to explore how such positions are shaped by cultural belief systems and to negotiate meanings for texts.

The aims of studies in language and literature courses are to enable students to:

- engage with a range of texts, in a variety of media and forms, from different periods, styles and cultures
- develop skills in listening, speaking, reading, writing, viewing, presenting and performing
- develop skills in interpretation, analysis and evaluation
- develop sensitivity to the formal and aesthetic qualities of texts and an appreciation of how they contribute to diverse responses and open up multiple meaning
- develop an understanding of relationships between texts and a variety of perspectives, cultural contexts, and local and global issues, and an appreciation of how they contribute to diverse responses and open up multiple meanings
- develop an understanding of the relationships between studies in language and literature and other disciplines
- communicate and collaborate in a confident and creative way
- foster a lifelong interest in and enjoyment of language and literature.

II. Curriculum model overview

Syllabus component	Recommended teaching hours	
	SL	HL
Readers, writers and texts	50	80
Time and space	50	80
Intertextuality: connecting texts	50	80
Total teaching hours	**150**	**240**

Assessment at a glance

Type of assessment	Format of assessment	Time (hours)		Weighting of final grade (%)	
		SL	HL	SL	HL
External					
Paper 1: Guided textual analysis	Guided analysis of unseen non-literary passage/passages from different text types.	1.25	2.25	35	35
Paper 2: Comparative essay	Comparative essay based on two literary works written in response to a choice of one out of four questions.	1.75	1.75	35	25
HL essay	Written coursework component: 1,200–1,500 word essay on one literary work or a non-literary body of work studied.				20
Internal					
Individual oral	Prepared oral response on the way that one literary work and one non-literary body of work studied have approached a common global issue.			30	20

III. Assessment model

It is the intention of this course that students are able to fulfill the following assessment objectives:

1. Know, understand and interpret:
   - a range of texts, works and/or performances, and their meanings and implications
   - contexts in which texts are written and/or received
   - elements of literary, stylistic, rhetorical, visual and/or performance craft
   - features of particular text types and literary forms.
2. Analyse and evaluate:
   - ways in which the use of language creates meaning
   - uses and effects of literary, stylistic, rhetorical, visual or theatrical techniques
   - relationships among different texts
   - ways in which texts may offer perspectives on human concerns.
3. Communicate:
   - ideas in clear, logical and persuasive ways
   - in a range of styles, registers and for a variety of purposes and situations
   - (for literature and performance only) ideas, emotion, character and atmosphere through performance.

Literature and performance

I. Course description and aims

Literature and performance is an interdisciplinary synthesis of literature and theatre. It brings together literary analysis, based on close reading, critical writing and discussion, with practical and aesthetic elements of theatre. In this course students engage with a range of literary works, perform dramatic texts, and transform texts into realized performances. The course is grounded in knowledge, skills and processes associated with the individual disciplines, while developing interdisciplinary understandings generated from the interactions between literature and performance. Literature and performance is only available as standard level (SL) course.
Literature and performance is one of the three Diploma Programme (DP) courses grounded in the study of language and literature. Expectations of language usage, level of analysis, and of critical reflection are the same across the three studies in language and literature courses. Yet literature and performance is unique in that it asks students to integrate understandings from two disciplines to develop further insight and create products that would not be possible within the single disciplines alone. Investigating a literary text through performance provides students with a unique perspective of the text; likewise, grounding a theatrical performance in literary understanding provides students with deeper sensitivity to the process of theatre-making.

As an interdisciplinary course, literature and performance shares the course aims of both studies in language and literature and arts subjects.

The aims of all subjects in studies in language and literature are to enable students to:

1. engage with a range of texts, in a variety of media and forms, from different periods, styles, and cultures
2. develop skills in listening, speaking, reading, writing, viewing, presenting and performing
3. develop skills in interpretation, analysis and evaluation
4. develop sensitivity to the formal and aesthetic qualities of texts and an appreciation of how they contribute to diverse responses and open up multiple meanings
5. develop an understanding of relationships between texts and a variety of perspectives, cultural contexts, and local and global issues, and an appreciation of how they contribute to diverse responses and open up multiple meanings
6. develop an understanding of the relationships between studies in language and literature and other disciplines
7. communicate and collaborate in a confident and creative way
8. foster a lifelong interest in and enjoyment of language and literature.

The aims of all subjects in the arts are to enable students to:

1. explore the diversity of the arts across time, cultures and contexts
2. develop as imaginative and skilled creators and collaborators
3. express ideas creatively and with competence in forms appropriate to the artistic discipline
4. critically reflect on the process of creating and experiencing the arts
5. develop as informed, perceptive and analytical practitioners
6. enjoy lifelong engagement with the arts.

II. Curriculum model overview

Each of the areas of exploration referred to below acts as a critical lens for students and teachers to study literary texts and their performance. The areas of exploration are intended as overlapping ways of approaching texts and performances.

Syllabus component	Teaching hours SL
Readers, writers and texts This area of exploration introduces students to the nature of literature, its study and its performance. It encourages students to explore the choices made by authors and the way meaning is created. The study also focuses on the impact the literature has on the student and the role readers and audiences play in generating meaning. It encourages students to move from a personal response to an understanding and interpretation that is influenced by the community of readers, and audience members, of which they are a part.	50
Time and space This area of exploration focuses on the idea that literary texts and performances are neither created nor received in a vacuum. It explores the variety of contexts in which texts are written, read and performed across time and space as well as the ways literature and performance mirror the world at large. Students examine how cultural conditions can shape the writing and staging of a literary text, how literature and performance can reflect or refract cultural conditions, and the ways culture and identity influence reception.	50
Intertextuality: connecting texts This area of exploration focuses on the connections between and among diverse texts, traditions, creators, ideas, and forms. Literature and performance asks students to examine and develop connections between written and performed texts. It encourages the comparative study of different written and performed texts so that students may gain deeper appreciation of their unique characteristics as well as complex systems of connection.	50
Total teaching hours	150

Sample questions

- Some literary texts, although set in a particular place or time, convey ideas that are universal. In what ways is this true in two of the works you have studied?
- How do two of the works you have studied portray the struggle to be understood?
- Referring to two works you have studied, discuss how the author has created a convincing "world".

III. Assessment model

By the end of the literature and performance course students will be expected to demonstrate the following.

1. Know, understand and interpret:
   - a range of texts, works and/or performances, and their meanings and implications
   - contexts in which texts are written and/or received
   - elements of literary, stylistic, rhetorical, visual and/or performance craft
   - features of particular text types and literary forms.

2. Analyse and evaluate:
   - ways in which the use of language creates meaning
   - uses and effects of literary, stylistic, rhetorical, visual or theatrical techniques
   - relationships among different texts
   - ways in which texts may offer perspectives on human concerns.

3. Communicate:
   - ideas in clear, logical and persuasive ways
   - in a range of styles, registers and for a variety of purposes and situations
   - ideas, emotion, character and atmosphere through performance.

Assessment at a glance

Type of assessment	Format of assessment	Weighting of final grade (%)
External		60
Paper 1	The paper consists of four general questions. In response to one question, students write a comparative essay based on two works studied in the course. (30 marks) *This is a common assessment among all three studies in language and literature courses in the Diploma Programme.*	30
Written assignment	In an essay of no more than 2,000 words, students critically examine an extract from a dramatic work that they have explored through performance. They analyse how the dramatic features of the extract were staged through their own individual performance choices. (26 marks)	30
Internal		40
Transformative performance and individual oral	This internal assessment consists of two compulsory parts. **Transformative performance (10 minutes)** • Students transform an extract from a non-dramatic literary work into a piece of theatre. • This piece of theatre is then performed to a live audience. **Individual oral (15 minutes)** • Students complete an individual oral in which they explain their process of transforming the extract into performance. Both parts are internally assessed by the teacher and externally moderated by the IB at the end of the course. (32 marks)	40

International Baccalaureate Diploma Programme Subject Brief

Language ab initio

First assessment 2020

I. Course description and aims

Language acquisition consists of two modern language courses—language ab initio and language B—designed to provide students with the necessary skills and intercultural understanding to enable them to communicate successfully in an environment where the language studied is spoken.

Offered at SL only, language ab initio is a language acquisition course designed for students with no previous experience in—or very little exposure to—the target language.

Language ab initio students develop their receptive, productive and interactive skills while learning to communicate in the target language in familiar and unfamiliar contexts.

Students develop the ability to communicate through the study of language, themes and texts. There are five prescribed themes: identities, experiences, human ingenuity, social organization and sharing the planet. While the themes are common to both language ab initio and language B, the language ab initio syllabus additionally prescribes four topics for each of the five themes, for a total of 20 topics that must be addressed over the two years of the course.

The following language acquisition aims are common to both language ab initio and language B.

- Develop international-mindedness through the study of languages, cultures, and ideas and issues of global significance.
- Enable students to communicate in the language they have studied in a range of contexts and for a variety of purposes.
- Encourage, through the study of texts and through social interaction, an awareness and appreciation of a variety of perspectives of people from diverse cultures.
- Develop students' understanding of the relationship between the languages and cultures with which they are familiar.
- Develop students' awareness of the importance of language in relation to other areas of knowledge.
- Provide students, through language learning and the process of inquiry, with opportunities for intellectual engagement and the development of critical- and creative-thinking skills.
- Provide students with a basis for further study, work and leisure through the use of an additional language.
- Foster curiosity, creativity and a lifelong enjoyment of language learning.

II. Curriculum model overview

The curriculum is organized around five prescribed themes and 20 prescribed topics with which the students engage though written, audio, visual and audio-visual texts. Students develop into successful, effective communicators by considering the conceptual understandings of context, audience, purpose, meaning and variation. Communication is evidenced through receptive, productive and interactive skills.

III. Assessment model

The language acquisition assessment objectives are common to both language ab initio and language B.

- Communicate clearly and effectively in a range of contexts and for a variety of purposes.
- Understand and use language appropriate to a range of interper-sonal and/or intercultural contexts and audiences.
- Understand and use language to express and respond to a range of ideas with fluency and accuracy.
- Identify, organize and present ideas on a range of topics.
- Understand, analyse and reflect upon a range of written, audio, visual and audio-visual texts.

Assessment at a glance

Language ab initio SL assessment outline		Weighting
External 75%	**Paper 1** (productive skills) Two written tasks—each from a choice of three Writing—30 marks	**25%**
	Paper 2 (receptive skills) Separate sections for listening and reading Listening—25 marks Reading—40 marks	 **25%** **25%**
Internal 25%	**Individual oral assessment** 30 marks	**25%**

For the individual oral internal assessment, the stimulus at language ab initio SL is a visual image that is clearly relevant to one (or more) of the themes of the course.

IV. Content outline

Theme	Guiding principle	Prescribed topics	Possible questions
Identities	Explore the nature of the self and how we express who we are.	• Personal attributes • Personal relationships • Eating and drinking • Physical well-being	• How do I present myself to others? • How do I express my identity? • How do I achieve a balanced and healthy lifestyle?
Experiences	Explore and tell the stories of the events, experiences and journeys that shape our lives.	• Daily routine • Leisure • Holidays • Festivals and celebrations	• How does travel broaden our horizons? • How would my life be different if I lived in another culture? • What are the challenges of being a teenager? • How are customs and traditions similar or different across cultures?
Human ingenuity	Explore the ways in which human creativity and innovation affect our world.	• Transport • Entertainment • Media • Technology	• How do science and technology affect my life? • How do I use media in my daily life? • What can I learn about a culture through entertainment?
Social organization	Explore the ways in which groups of people organize themselves, or are organized, through common systems or interests.	• Neighbourhood • Education • The workplace • Social issues	• What purpose do rules and regulations have in society? • What is my role in society? • What options do I have in the world of work?
Sharing the planet	Explore the challenges and opportunities faced by individuals and communities in the modern world.	• Climate • Physical geography • The environment • Global issues	• What can I do to help the environment? • How do my surroundings affect the way I live? • What can I do to make the world a better place?

International Baccalaureate Diploma Programme Subject Brief

Individuals and societies: Geography

First assessments 2019

Diploma Programme

I. Course description and aims

Geography is a dynamic subject firmly grounded in the real world, and focuses on the interactions between individuals, societies and physical processes in both time and space. It seeks to identify trends and patterns in these interactions. It also investigates the way in which people adapt and respond to change, and evaluates actual and possible management strat-egies associated with such change. Geography describes and helps to explain the similarities and differences between different places, on a variety of scales and from different perspectives.

Geography as a subject is distinctive in its spatial dimension and occupies a middle ground between social or human sciences and natural sciences. The course integrates physical, environmental and human geography, and students acquire elements of both socio-economic and scientific meth-odologies. Geography takes advantage of its position to examine relevant concepts and ideas from a wide variety of disciplines, helping students develop life skills and have an appreciation of, and a respect for, alternative approaches, viewpoints and ideas.

Students at both SL and HL are presented with a common core and optional geographic themes. HL students also study the HL core extension. Although the skills and activity of studying geography are common to all students, HL students are required to acquire a further body of knowledge, to demon-strate critical evaluation and to further synthesize the concepts in the HL extension.

The aims of the geography course at SL and HL are to enable students to:

- develop an understanding of the dynamic interrelationships between people, places, spaces and the environment at different scales
- develop a critical awareness and consider complexity thinking in the context of the nexus of geographic issues, including:
    - acquiring an in-depth understanding of how geographic issues, or wicked problems, have been shaped by powerful human and physical processes
    - synthesizing diverse geographic knowledge in order to form viewpoints about how these issues could be resolved.
- understand and evaluate the need for planning and sustainable development through the management of resources at varying scales.

II. Curriculum model overview

Syllabus component	Teaching hours	
	SL	HL
Geographic themes—seven options **SL—two options; HL— three options** • Freshwater • Oceans and coastal margins • Extreme environments • Geophysical hazards • Leisure, tourism and sport • Food and health • Urban environments	60	90
SL and HL core **Geographic perspectives—global change** • Population distribution—changing population • Global climate—vulnerability and resilience • Global resource consumption and security	70	70
HL only **Geographic perspectives—global interac-tions** • Power, places and networks • Human development and diversity • Global risks and resilience		60
Internal assessment **SL and HL Fieldwork** Fieldwork, leading to one written report based on a fieldwork question, information collection and analysis with evaluation	20	20
Total teaching hours	150	240

acquiring an in-depth understanding of how geographic issues, or wicked problems, have been shaped by powerful human and physical processes synthesizing diverse geographic knowledge in order to form viewpoints about how these issues could be resolved. • understand and evaluate the need for planning and sustainable development through the management of resources at varying scales.

III. Assessment model

There are four assessment objectives (AOs) for the SL and HL geography course. Having followed the course at SL or HL, students will be expected to do the following:

1. **Demonstrate knowledge and understanding of specified content**
   - the core theme—global change
   - two optional themes at SL and three optional themes at HL
   - at HL, the HL extension—global interactions
   - in internal assessment, a specific geographic research topic.
2. **Demonstrate application and analysis of knowledge and understanding**
   - apply and analyse geographic concepts and theories
   - identify and interpret geographic patterns and processes in unfamiliar information, data and cartographic material demonstrate the extent to which theories and concepts
   - are recognized and understood in particular contexts.
3. **Demonstrate synthesis and evaluation**
   - examine and evaluate geographic concepts, theories and perceptions
   - use geographic concepts and examples to formulate and present an argument
   - evaluate materials using methodology appropriate for geographic fieldwork
   - at HL only, demonstrate synthesis and evaluation of the HL extension: global interactions.
4. **Select, use and apply a variety of appropriate skills and techniques**
   - select, use and apply:
     - prescribed geographic skills in appropriate contexts
     - techniques and skills appropriate to a geographic research question
   - produce well-structured written material, using appropriate terminology.

Assessment at a glance

Type of assessment	Format of assessment	Time (hours)		Weighting of final grade (%)	
		SL	HL	SL	HL
External		2.75	4.5	75	80
Paper 1	Each option has a structured question and one extended answer question from a choice of two.	1.5	2.25	35	35
Paper 2	Three structured questions, based on each SL/HL core unit. Infographic or visual stimulus, with structured questions. One extended answer question from a choice of two.	1.25	1.25	40	25
Paper 3	Choice of three extended answer questions, with two parts, based on each HL core extension unit.		1		20
Internal		20	20	25	20
Fieldwork	One written report based on a fieldwork question from any suitable syllabus topic, information collection and analysis with evaluation.	20	20	25	20

IV. Sample questions

- Examine the role of plate margin type in determining the severity of volcanic hazards.
- Evaluate the success of attempts to predict tectonic hazard event and their possible impacts.
- Evaluate the role of agribusiness and new technologies in increasing world food supply.
- Examine the relationship between food security and health.
- Using examples, analyse how technological developments can threaten the security of states.
- To what extent does a global culture exist?

International Baccalaureate Diploma Programme Subject Brief

Individuals and societies: History—standard level

First assessments 2017

Diploma Programme

I. Course description and aims

The DP history course is a world history course based on a comparative and multi-perspective approach to history. It involves the study of a va-riety of types of history, including political, economic, social and cultural, and provides a balance of structure and flexibility.

The course emphasizes the importance of encouraging students to think historically and to develop historical skills as well as gaining factual knowledge. It puts a premium on developing the skills of critical thinking, and on developing an understanding of multiple interpre-tations of history. In this way, the course involves a challenging and demanding critical exploration of the past. Teachers explicitly teach thinking and re-search skills such as comprehension, text analysis, transfer, and use of primary sources.

There are six key concepts that have particular prominence throughout the DP history course: change, continuity, causation, consequence, significance and perspectives.

The aims of the DP history course are to enable students to:

- develop an understanding of, and continuing interest in, the past
- encourage students to engage with multiple perspectives and to appreciate the complex nature of historical concepts, issues, events and developments
- promote international-mindedness through the study of history from more than one region of the world
- develop an understanding of history as a discipline and to develop historical consciousness including a sense of chronology and context, and an understanding of different historical perspectives
- develop key historical skills, including engaging effectively with sources
- increase students' understanding of themselves and of contempo-rary society by encouraging reflection on the past.

II. Curriculum model overview

Component	Recommended teaching hours
Prescribed subjects ***One of the following, using two case studies, each taken from a different region of the world:*** 1. Military leaders 2. Conquest and its impact 3. The move to global war 4. Rights and protest 5. Conflict and intervention	40
World history topics ***Two of the following, using topic examples from more than one region of the world:*** 1. Society and economy (750–1400) 2. Causes and effects of wars (750–1500) 3. Dynasties and rulers (750–1500) 4. Societies in transition (1400–1700) 5. Early Modern states (1450–1789) 6. Causes and effects of Early Modern wars (1500–1750) 7. Origins, development and impact of industrialization (1750–2005) 8. Independence movements (1800–2000) 9. Emergence and development of democratic states (1848–2000) 10. Authoritarian states (20th century) 11. Causes and effects of 20th-century wars 12. The Cold War: Superpower tensions and rivalries (20th century)	90
Internal assessment Historical investigation	20

III. Assessment model

There are four assessment objectives for the DP history course. Having followed the course at standard level (SL), students will be expected to meet the following objectives.

Assessment objective 1: Knowledge and understanding

- Demonstrate detailed, relevant and accurate historical knowledge.
- Demonstrate understanding of historical concepts and context.
- Demonstrate understanding of historical sources.

Assessment objective 2: Application and analysis

- Formulate clear and coherent arguments.
- Use relevant historical knowledge to effectively support analysis.
- Analyse and interpret a variety of sources.

Assessment objective 3: Synthesis and evaluation

- Integrate evidence and analysis to produce a coherent response.
- Evaluate different perspectives on historical issues and events, and integrate this evaluation effectively into a response.
- Evaluate sources as historical evidence, recognizing their value and limitations.
- Synthesize information from a selection of relevant sources.

Assessment objective 4: Use and application of appropriate skills

- Integrate evidence and analysis to produce a coherent response.
- Evaluate different perspectives on historical issues and events, and integrate this evaluation effectively into a response.
- Evaluate sources as historical evidence, recognizing their value and limitations.
- Synthesize information from a selection of relevant sources.

Assessment at a glance

Type of assessment	Format of assessment	Time (hours)	Weighting of final grade (%)
External		2.5	75
Paper 1	Source-based paper based on the five prescribed subjects	1	30
Paper 2	Essay paper based on the 12 world history topics	1.5	45
Internal			
Historical investigation	A historical investigation into a topic of the student's choice.	20	25

IV. Sample questions

Paper 2 (HL and SL)

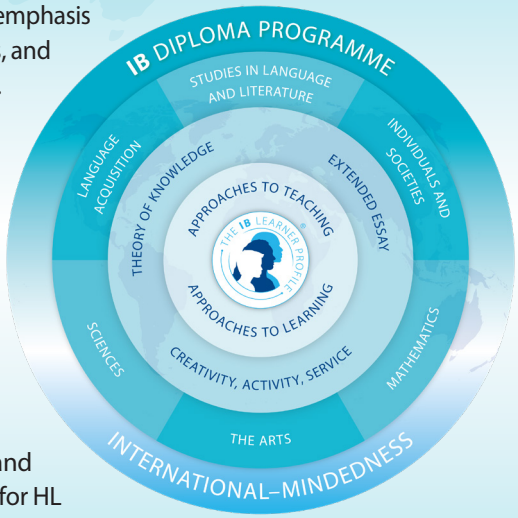
- Examine the impact of industrialization on standards of living and working conditions in one country.
- Compare and contrast the impact on women of the policies of two authoritarian states, each chosen from a different region.
- Compare and contrast the role of technology in determining the outcome of two 20th-century wars.
- Examine the impact of the US policy of containment on superpower relations between 1947 and 1964.

International Baccalaureate
Diploma Programme Subject Brief

Individuals and societies: Global politics

First assessment 2026

The Diploma Programme (DP) is a rigorous pre-university course of study designed for students in the 16 to 19 age range. It is a broad-based two-year course that aims to encourage students to be knowledgeable and inquiring, but also caring and compassionate. There is a strong emphasis on encouraging students to develop intercultural understanding, open-mindedness, and the attitudes necessary for them to respect and evaluate a range of points of view.



The course is presented as six academic areas enclosing a central core. Students study two modern languages (or a modern language and a classical language), a humanities or social science subject, an experimental science, mathematics and one of the creative arts. Instead of an arts subject, students can choose two subjects from another area. It is this comprehensive range of subjects that makes the Diploma Programme a demanding course of study designed to prepare students effectively for university entrance. In each of the academic areas students have flexibility in making their choices, which means they can choose subjects that particularly interest them and that they may wish to study further at university.

Normally, three subjects (and not more than four) are taken at higher level (HL), and the others are taken at standard level (SL). The IB recommends 240 teaching hours for HL subjects and 150 hours for SL. Subjects at HL are studied in greater depth and breadth than at SL. In addition, three core elements—the extended essay, theory of knowledge and creativity, activity, service—are compulsory and central to the philosophy of the programme.

I. Course description and aims

DP global politics is a course for students who want to understand more about how the world they live in works, and what makes it change (or prevents it from changing). The course draws on a variety of disciplinary traditions in the study of politics and international relations, and more broadly in the social sciences and humanities. Students build their knowledge and understanding of the local, national, international, and global dimensions of political activity and processes by critically engaging with contemporary political issues and challenges.

The course integrates concepts, content and contexts through inquiry.

- **Concepts** such as power, sovereignty, legitimacy and interdependence are explored and examined critically throughout the course.
- **Content** informs inquiries through a variety of global politics topics, encompassing political systems and actors, power interactions, frameworks, treaties and conventions, terminology, and analysis models.
- **Contexts** diversify, shape and channel inquiries through contemporary real-world examples and cases.

The flexible syllabus allows educators to build the course around their students' contexts and interests, as well as contemporary events and developments in global politics. Thinking, analysis and research skills are fostered through guided and independent inquiries into political issues and challenges, with a special focus on identifying and engaging with diverse perspectives.

The aims of the global politics course at SL and at HL are to enable students to:

- explore and evaluate power in contemporary global politics
- examine how state and non-state actors operate and interact within political systems
- investigate and analyse contemporary political issues and challenges from multiple perspectives
- develop a lifelong commitment to active global citizenship through collaboration and agency.

II. Curriculum model overview

The recommended teaching time is 150 hours to complete the SL course and 240 hours to complete the HL course. Students and teachers enjoy a great deal of freedom to personalize and integrate the required course components as outlined below.

Syllabus component	Teaching hours	
	SL	HL
Core Understanding power and global politics **Thematic studies** • Rights and justice • Development and sustainability • Peace and conflict	**125**	**125**
Internal assessment Engagement project	**25**	**35**
HL extension: global political challenges	**-**	**80**
Total	**150**	**240**

III. Assessment model

By the end of the global politics course, students are expected to achieve the following assessment objectives.

Knowledge and understanding

Demonstrate knowledge and understanding of:

- power relationships
- political concepts
- relevant source material
- political issues and challenges.

Application and analysis

- Apply relevant concepts and tools to analyse contemporary political issues and challenges in a variety of contexts.
- Identify and analyse information, claims and perspectives in source material.
- Identify and analyse relevant evidence to formulate, present and sustain an argument.

Synthesis and evaluation

- Synthesize and evaluate evidence (including source material) about global politics.
- Synthesize and evaluate perspectives and approaches to global politics.
- Examine and synthesize perspectives on political beliefs, positions, and biases.

Use and application of appropriate skills

- Research and investigate political issues and challenges.
- Communicate analysis of political issues and challenges.
- Reflect on the process and results of research and investigation.

Assessment at a glance

Type of assessment	Format of assessment	Time (hours)		Weighting of final grade (%)	
		SL	HL	SL	HL
External		**2.75**	**4.25**	**70**	**80**
Paper 1	Source-based questions that address topics from the global politics core in an integrated way	1.25	1.25	30	20
Paper 2	Extended response questions based on prescribed content from the thematic studies	1.5	1.5	40	30
Paper 3 (HL only)	Stimulus-based questions related to the HL extension syllabus (global political challenges)	-	1.5	-	30
Internal		**25**	**30**	**30**	**20**
Engagement project	A written report on a political issue explored through engagement and research	25	30	30	20

IV. Sample questions

- Using Source C (included in the paper) and **one** example you have studied, **explain** the reasons why international cooperation may be problematic for some states.
- **Discuss** the view that development always results in inequalities.
- **To what extent** is addressing structural violence increasingly important to achieving lasting peace?
- With reference to **two** of the cases you have researched, examine the links between multiple global political challenges.
- With reference to **two** cases, evaluate the effectiveness of international governmental organizations for addressing global political challenges.

About the IB: For over 50 years, the IB has built a reputation for high-quality, challenging programmes of education that develop internationally minded young people who are well prepared for the challenges of life in the 21st century and are able to contribute to creating a better, more peaceful world.

For further information on the IB Diploma Programme, visit: **https://ibo.org/en/dp**.

Complete subject guides can be accessed through the Programme Resource Centre or purchased through the IB store: **https://www.ibo.org/new-store**.

For more on how the DP prepares students for success at university, visit: **https://ibo.org/en/university-admission**.

International Baccalaureate
Diploma Programme Subject Brief

Individuals and societies: Business management

First assessments 2024

Diploma Programme

I. Course description and aims

The business management course is designed to meet the current and future needs of students who want to develop their knowledge of business content, concepts and tools to assist with business decision-making. Future employees, business leaders, entrepreneurs or social entrepreneurs need to be confident, creative and compassionate as **change agents** for business in an increasingly interconnected global marketplace. The business management course is designed to encourage the development of these attributes. Through the exploration of four interdisciplinary concepts: **creativity, change, ethics** and **sustainability**, this course empowers students to explore these concepts from a business perspective. Business management focuses on business functions, management processes and decision-making in contemporary contexts of strategic uncertainty. Students examine how business decisions are influenced by factors that are internal and external to an organization and how these decisions impact upon a range of internal and external stakeholders. Emphasis is placed on strategic decision-making and the operational business functions of human resource management, finance and accounts, marketing, and operations management. Business management is a challenging and dynamic discipline that more than meets the needs of our students growing and developing in a complex business environment. This course prepares students to be global citizens ready to face up to the challenges and opportunities awaiting them in our ever-changing world.

The aims of the DP **business management course** are to enable students to:

1. develop as confident, creative and compassionate business leaders, entrepreneurs, social entrepreneurs and as change agents
2. foster an informed understanding of ethical and sustainable business practices
3. explore the connections between individuals, businesses and society
4. engage with decision-making as a process and a skill.

II. Curriculum model overview

Component	teaching hours
Unit 1: Introduction to business management 1.1 What is a business? 1.2 Types of business entities 1.3 Business objectives 1.4 Stakeholders 1.5 Growth and evolution 1.6 Multinational companies (MNCs)	**20**
Unit 2: Human resource management 2.1 Introduction to human resource management 2.2 Organizational structure 2.3 Leadership and management 2.4 Motivation and demotivation 2.5 Organizational (corporate) culture (HL only) 2.6 Communication 2.7 Industrial/employee relations (HL only)	**35**
Unit 3: Finance and accounts 3.1 Introduction to finance 3.2 Sources of finance 3.3 Costs and revenues 3.4 Final accounts 3.5 Profitability and liquidity ratio analysis 3.6 Debt/equity ratio analysis (HL only) 3.7 Cash flow 3.8. Investment appraisal 3.9 Budgets (HL only)	**45**
Unit 4: Marketing 4.1 Introduction to marketing 4.2 Marketing planning 4.3 Sales forecasting (HL only) 4.4 Market research 4.5 The seven Ps of the marketing mix 4.6 International marketing (HL only)	**35**
Unit 5: Operations management 5.1 Introduction to operations management 5.2 Operations methods 5.3 Lean production & quality management (HL only) 5.4 Location 5.5 Break-even analysis 5.6 Production planning (HL only) 5.7 Crisis managem't & contingency planning (HL only) 5.8 Research and development (HL only) 5.9 Management information systems (HL only)	**45**
Business management toolkit	**35**
Research time allocated for the pre-released statement in paper 1	**5**
Internal assessment	**20**

III. Assessment model

By the end of the business management course, students are expected to achieve the following assessment objectives.

AO1: Knowledge and understanding
Demonstrate knowledge and understanding of:

- business management tools and theories
- course topics and concepts
- business problems, issues and decisions
- HL extension topics (HL only).

AO2: Application and analysis
Apply and analyse:

- business management tools and theories
- course topics and concepts
- business problems, issues and decisions
- business decisions and issues through the selection and use of appropriate data
- HL extension topics (HL only).

AO3: Synthesis and evaluation
Synthesize and evaluate:

- business management tools and theories
- course topics and concepts
- business problems, issues and decisions
- stakeholder interests to reach informed business decisions
- recommendations for competing future strategic options (HL only)
- HL extension topics (HL only).

AO4: Use and application of appropriate skills

- Select and apply relevant business management tools, theories and concepts to support research into a business issue or problem.
- Select, interpret and analyse business materials from a range of primary and secondary sources.
- Create well-structured materials using business management terminology.
- Communicate analysis, evaluation and conclusions of research effectively.

Type of assessment	Format of assessment	Time	Weighting of final grade (%)
External		4 hrs 30 mins	80
Paper 1	Based on a pre-released statement that specifies the *context* and *background* for the unseen case study	1 hr 30 mins	25
Paper 2	Based on unseen stimulus material with a quantitative focus	1 hr 45 mins	30
Paper 3	Based on unseen stimulus material about a social enterprise	1 hr 15 mins	25
Internal			
Business research project	Students produce a research project about a real business issue or problem facing a particular organization using a conceptual lens	20 hrs	20

IV. Sample questions

Paper 1

- Explain **one** advantage and **one** disadvantage for *MT* of being a small business. . 4]
- Discuss whether Jackie should accept or reject KC's offer to buy *MT*. [10]

Paper 2

- Using the data provided in **Table 7**, other information in the stimulus, and a Boston Consulting Group (BCG) matrix, recommend to QS which e-scooter model should be removed from QS's portfolio in order for the company to remain profitable. [10]

Paper 3

- Using all the resources provided and your knowledge of business management, recommend a possible plan of action to ensure the sustainability of *SML* for the next five years. [17]

International Baccalaureate
Diploma Programme Subject Brief

Environmental systems and societies

First assessment 2026

I. Course description and aims

Environmental systems and societies (ESS) is an interdisciplinary course, encompassing both the sciences and individuals and societies and is offered at both standard level (SL) and higher level (HL). As such, ESS combines a mixture of methodologies, techniques and knowledge associated with both the sciences and individuals and societies.

ESS is both a complex and contemporary course that engages students in the challenges of 21st century environmental issues. Consequently, it requires its students to develop a diverse set of skills, knowledge and understanding from different disciplines. Students develop a scientific approach through explorations of environmental systems. They also acquire understandings and methods from individuals and societies subjects whilst studying sustainability issues within social, cultural, economic, political, and ethical contexts. The interdisciplinary nature of the course means students produce a synthesis of understanding from the various topics studied. It also emphasizes the ability to perform research and investigations and to participate in philosophical, ethical, and pragmatic discussions of the issues involved from the local through to the global level.

ESS aims to empower and equip students to:

1. develop understanding of their own environmental impact, in the broader context of the impact of humanity on the Earth and its biosphere
2. develop knowledge of diverse perspectives to address issues of sustainability
3. engage and evaluate the tensions around environmental issues using critical thinking
4. develop a systems approach that provides a holistic lens for the exploration of environmental issues
5. be inspired to engage in environmental issues across local and global contexts.

Because of the interdisciplinary nature of the subject, students can choose to study ESS to count as either a sciences or individuals and societies course, or as both. In this latter option, students have the opportunity to study an additional subject from any other subject group, including the sciences and individuals and societies subjects.

II. Curriculum model overview

The ESS course has at its heart the intention of providing students with the capacity to understand and make informed decisions regarding the pressing environmental issues we face. A conceptual, interdisciplinary approach is essential to problem solving in ESS as this allows for truly holistic thinking about impending sustainability challenges.

The ESS course engages students and teachers with a conceptual approach. All students are encouraged to integrate the three key concepts of perspectives, systems and sustainability throughout the course. These concepts are given special focus within the foundation's unit.

Students at SL and HL share the following:

- the study of a concept-based syllabus
- a course which promotes holistic thinking about environmental issues and their solutions
- a foundations unit which introduces and explores the three concepts: perspectives, systems and sustainability
- one piece of internally assessed work, the internal assessment (IA)
- the collaborative sciences project.

The SL course provides students with a fundamental understanding of environmental studies and experience of the associated concepts and skills. The HL course requires students to extend their knowledge and understanding of the subject, exploring the complexity of issues with additional breadth and depth, providing a solid foundation for further study at university level.

The foundations unit is designed to be the starting point for both standard and higher level courses. Other topics contain additional HL content, which provide both greater breadth and depth. The SL course has a recommended 150 teaching hours and the HL course 240 hours. This difference is refle ted in the additional content studied by HL students.

The HL course has three HL only lenses—environmental law, environmental and ecological economics, and environmental ethics. The conceptually more demanding HL lenses allow for far more sophisticated processing and balanced viewpoints. The additional HL content requires the student to make more connections between diverse areas of the syllabus, resulting in increased networked knowledge and a comprehensive understanding of the complexities of environmental issues as well as possible strategies, solutions and management. HL students are required to demonstrate critical evaluation and to synthesize material in the core content (common to both SL and HL), HL extension material and HL lenses, facilitating a more complete view of a problem with analysis at greater breadth and depth.

Syllabus component	Recommended teaching hours	
	SL	HL
Syllabus content	**100**	**190**
Topic 1 Foundation	**16**	
1.1 Perspectives	3	
1.2 Systems	5	
1.3 Sustainability	8	
Topic 2 Ecology	**22**	**35**
Topic 3 Biodiversity and conservation	**13**	**26**
Topic 4 Water	**12**	**25**
Topic 5 Land	**8**	**15**
Topic 6 Atmosphere and climate change	**10**	**23**
Topic 7 Natural resources	**10**	**18**
Topic 8 Human populations and urban systems	**9**	**15**
Higher level (HL) lens		
HL.a Environmental law		**5**
HL.b Environmental and ecological economics HL.c		**7**
Environmental ethics		**5**
Experimental programme	**50**	
Practical work	30	
Collaborative sciences project	10	
Scientifi investigation	10	

Skills in the study of environmental systems and societies

The skills and techniques students must experience through the course are encompassed within the tools. These support the application and development of the inquiry process in the delivery of the ESS course.

Tools
- Experimental techniques
- Mathematics
- Technology
- Systems and models

Inquiry process
- Inquiring and designing
- Collecting and processing data
- Concluding and evaluating

Teachers are encouraged to provide opportunities for students to encounter and practise the skills throughout the programme. Rather than being taught as stand-alone topics, these skills should be integrated into the teaching of the syllabus when they are relevant to the syllabus topics being covered.

III. Assessment model

There are four assessment objectives for the DP ESS course. Having studied the course, students are expected to demonstrate the following assessment objectives.

Assessment objective 1

Demonstrate knowledge and understanding of relevant:

- terminology, facts, and concepts
- methodologies and techniques
- perspectives and worldviews.

Assessment objective 2

Apply this knowledge and understanding in the analysis of:

- explanations, concepts, and theories
- primary and secondary data and models
- case studies and examples
- arguments and values.

Assessment objective 3

Evaluate, justify, and synthesize, as appropriate:

- explanations, concepts, theories, and models
- arguments and proposed solutions
- methods of field ork and investigation
- political, economic, ethical and sociocultural contexts of issues.

Assessment objective 4

Investigate sustainability issues at the local or global level through:

- identifying an appropriate environmental issue and research question for investigation
- selecting and demonstrate the use of appropriate methods and skills to carry out insightful and ethical investigations into environmental issues.

Assessment at a glance

Type of assessment	Format of assessment	Time (hours)		Weighting of final grade %
		SL	HL	
External		**3.0**	**4.5**	**75 (SL)** **80 (HL)**
Paper 1	Students will be provided with data in a variety of forms relating to a specific, previously unseen case study. Questions will be based on the analysis and evaluation of the data in the case study. All questions are compulsory.	1.0	2.0	25 (SL) 30 (HL)
Paper 2	Section A is made up of short-answer and data-based questions. Section B requires students to answer structured essay questions. There is a limited amount of choice.	2.0	2.5	50 (SL/HL)
Internal		**10**		**25 (SL)** **20 (HL)**
Individual investigation	The individual investigation is an open-ended task in which the student gathers and analyses data to answer their own formulated research question. The outcome of the Individual investigation will be assessed through the form of a written report. The maximum overall word count for the report is 3,000 words.	10		25 (SL) 20 (HL)

International Baccalaureate Diploma Programme Subject Brief

Diploma Programme

Sciences:

Design technology—Standard level

First assessments 2016

I. Course description and aims

The Diploma Programme design technology course aims to develop internationally minded people whose enhanced understanding of design and the technological world can facilitate our shared guardian-ship of the planet and create a better world.

Inquiry and problem-solving are at the heart of the subject. DP design technology requires the use of the design cycle as a tool, which pro-vides the methodology used to structure the inquiry and analysis of problems, the development of feasible solutions, and the testing and evaluation of the solution. A solution can be defined as a model, proto-type, product or system that students have developed independently.

DP design technology achieves a high level of design literacy by enabling students to develop critical-thinking and design skills, which they can apply in a practical context. While designing may take various forms, it will involve the selective application of knowledge within an ethical framework.

Through the overarching theme of the nature of design, the aim of the DP design technology course is to enable students to develop:

1. a sense of curiosity as they acquire the skills necessary for independent and lifelong learning and action through inquiry into the technological world around them
2. an ability to explore concepts, ideas and issues with personal, local and global significance to acquire in-depth knowledge and under-standing of design and technology
3. initiative in applying thinking skills critically and creatively to identify and resolve complex social and technological problems through reasoned ethical decision-making
4. an ability to understand and express ideas confidently and creatively using a variety of communication techniques through col-laboration with others
5. a propensity to act with integrity and honesty, and take responsibility for their own actions in designing technological solutions to problems
6. an understanding and appreciation of cultures in terms of global technological development, seeking and evaluating a range of perspectives
7. a willingness to approach unfamiliar situations in an informed man-ner and explore new roles, ideas and strategies to confidently artic-ulate and defend proposals
8. an understanding of the contribution of design and technology to the promotion of intellectual, physical and emotional balance and the achievement of personal and social well-being
9. empathy, compassion and respect for the needs and feelings of others in order to make a positive difference to the lives of others and to the environment
10. skills that enable them to reflect on the impacts of design and tech-nology on society and the environment in order to develop their own learning and enhance solutions to technological problems.

II. Curriculum model overview

Component		teaching hours
Core	1. Human factors and ergonomics	**90**
	2. Resource management and sustainable production	12 22
	3. Modelling	
	4. Raw material to final product	12
	5. Innovation and design	23
	6. Classic design	13 8
	Practical work	**60**
	Design project	40
	Group 4 project Teacher-directed activities	10 10

The group 4 project

The group 4 project is a collaborative activity where students from dif-ferent group 4 subjects, within or between schools, work together. It al-lows for concepts and perceptions from across disciplines to be shared while appreciating the environmental, social and ethical implications of science and technology. It can be practically or theoretically based and aims to develop an understanding of the relationships between scientific disciplines and their influence on other areas. The emphasis is on interdisciplinary cooperation and the scientific processes.

III. Assessment model

The assessment objectives for design technology reflect those parts of the aims that will be formally assessed either internally or externally. Wherever appropriate, the assessment draws upon environmental and technological contexts and identify the social, moral and economic ef-fects of technology. It is the intention of the design technology course that students are able to fulfill the following assessment objectives:

1. Demonstrate knowledge and understanding of:
   - facts, concepts, principles and terminology
   - design methodology and technology
   - methods of communicating and presenting technological information.
2. Apply and use:
   - facts, concepts, principles and terminology
   - design methodology and technology
   - methods of communicating and presenting technological information.
3. Construct, analyse and evaluate:
   - design briefs, problems, specifications and plans
   - methods, techniques and products
   - data, information and technological explanations.
4. Demonstrate the appropriate research, experimentation, model-ling and personal skills necessary to carry out innovative, insight-ful, ethical and effective designing.

Assessment at a glance

Type of assessment	Format of assessment	Time (hours)	Weighting of final grade (%)
External		2.25	60
Paper 1	Multiple-choice questions on core material	0.75	30
Paper 2	Data-based, short-answer, and extended-response questions on core material	1.5	30
Internal		40	40
Design project	Individual design project	40	40

IV. Sample questions

- Which phrase best reflects the philosophy of the circular economy? (Paper 1)
  - A. Cradle to cradle
  - B. Cradle to grave
  - C. Made to be made again
  - D. Take, make, dispose
- Explain how the use of "design for the environment" software assists designers in choosing materials. (Paper 2)
- Discuss why the use of thermoplastic renders a product green but not sustainable. (Paper 2)

International Baccalaureate Diploma Programme Subject Brief

Diploma Programme

Sciences:

Biology—Standard level

First assessments 2016

I. Course description and aims

Biology is the study of life. The vast diversity of species makes biology both an endless source of fascination and a considerable challenge. Biologists attempt to understand the living world at all levels from the micro to the macro using many different approaches and techniques. Biology is still a young science and great progress is expected in the 21st century. This progress is important at a time of growing pressure on the human population and the environment.

By studying biology in the DP students should become aware of how scientists work and communicate with each other. While the scientific method may take on a wide variety of forms, it is the emphasis on a practical approach through experimental work that characterizes the sciences. Teachers provide students with opportunities to design investigations, collect data, develop manipulative skills, analyse results, collaborate with peers and evaluate and communicate their findings

Through the overarching theme of the nature of science, the aims of the DP biology course are to enable students to:

1. appreciate scientific study and creativity within a global context through stimulating and challenging opportunities
2. acquire a body of knowledge, methods and techniques that characterize science and technology
3. apply and use a body of knowledge, methods and techniques that characterize science and technology
4. develop an ability to analyse, evaluate and synthesize scientific information
5. develop a critical awareness of the need for, and the value of, effective collaboration and communication during scientific activities
6. develop experimental and investigative scientific skills including the use of current technologies
7. develop and apply 21st century communication skills in the study of science
8. become critically aware, as global citizens, of the ethical implications of using science and technology
9. develop an appreciation of the possibilities and limitations of science and technology
10. develop an understanding of the relationships between scientific disciplines and their influence on other areas of knowledge.

III. Assessment model

It is the intention of this course that students are able to fufil the following assessment objectives:

1. Demonstrate knowledge and understanding of:
   - facts, concepts, and terminology
   - methodologies and techniques
   - communicating scientific information.
2. Apply:
   - facts, concepts, and terminology
   - methodologies and techniques
   - methods of communicating scientific information.
3. Formulate, analyse and evaluate:
   - hypotheses, research questions and predictions
   - methodologies and techniques
   - primary and secondary data
   - scientific explanations.
4. Demonstrate the appropriate research, experimental, and personal skills necessary to carry out insightful and ethical investigations.

II. Curriculum Outline

Component	Recommended teaching hours
Core	**95**
1. Cell biology	15
2. Molecular biology	21
3. Genetics	15
4. Ecology	12
5. Evolution and biodiversity	12
6. Human physiology	20
Option (choice of 1 out of 4)	**15**
1. Neurobiology and behaviour	15
2. Biotechnology and bioinformatics	15
3. Ecology and conservation	15
4. Human physiology	15
Practical scheme of work Prescribed	**40**
and other practical activities Individual	20
investigation	10
Group 4 project	10

The group 4 project

The group 4 project is a collaborative activity where students from different group 4 subjects, within or between schools, work togeth-er. It allows for concepts and perceptions from across disciplines to be shared while appreciating the environmental, social and ethical implications of science and technology. It can be practically or theoretically based and aims to develop an understanding of the relationships between scientific disciplines and their influence on other areas of knowledge. The emphasis is on interdisciplinary cooperation and the scientific processes.

Assessment at a glance

Type of assessment	Format of assessment	Time (hours)	Weighting of final grade (%)
External		3	80
Paper 1	30 multiple-choice questions	0.75	20
Paper 2	Data-based, short answer and extended response questions	1.25	40
Paper 3	Data-based, short answer and extended response questions	1	20
Internal		10	20
Individual investigation	Investigation and write-up of 6 to 12 pages	10	20

IV. Sample questions

- Cyclins were discovered by Timothy R. Hunt in 1982 while studying sea urchins. What is a function of cyclins? (Paper 1)
- Antibiotics can be used to treat bacterial infections in human tissues because of differences in cell structure between prokaryotes and eukaryotes.
  - o Distinguish between the structure of prokaryotes and eukaryotes.
  - o Evaluate the drug tests that Florey and Chain carried out on penicillin.
  - o Explain the reasons for the ineffectiveness of antibiotics in the treatment of viral diseases. (Paper 2)
- The company BASF produces a genetically modified potato called Amflora. Outline the purpose of modifying the potato. (Paper 3)

International Baccalaureate Diploma Programme Subject Brief

Diploma Programme

Sciences:

Chemistry—Standard level

First assessments 2016

I. Course description and aims

Chemistry is an experimental science that combines academic study with the acquisition of practical and investigational skills. Chemical principles underpin both the physical environment in which we live and all biological systems. Chemistry is often a prerequisite for many other courses in higher education, such as medicine, biological science and environmental science.

Both theory and practical work should be undertaken by all students as they complement one another naturally, both in school and in the wider scientific community. The DP chemistry course allows students to develop a wide range of practical skills and to increase facility in the use of mathematics. It also allows students to develop interpersonal and information technology skills, which are essential to life in the 21st century.

By studying chemistry students should become aware of how scientists work and communicate with each other. While the scientific method may take on a wide variety of forms, it is the emphasis on a practical approach through experimental work that characterizes the subject. Teachers provide students with opportunities to develop manipulative skills, design investigations, collect data, analyse results and evaluate and communicate their findings.

Through the overarching theme of the nature of science, the aims of the DP chemistry course are to enable students to:

1. appreciate scientific study and creativity within a global context through stimulating and challenging opportunities
2. acquire a body of knowledge, methods and techniques that char-acterize science and technology
3. apply and use a body of knowledge, methods and techniques that characterize science and technology
4. develop an ability to analyse, evaluate and synthesize scientific in-formation
5. develop a critical awareness of the need for, and the value of, effec-tive collaboration and communication during scientific activities
6. develop experimental and investigative scientific skills including the use of current technologies
7. develop and apply 21st century communication skills in the study of science
8. become critically aware, as global citizens, of the ethical implications of using science and technology
9. develop an appreciation of the possibilities and limitations of sci-ence and technology
10. develop an understanding of the relationships between scientific disciplines and their influence on other areas of knowledge.

II. Curriculum model overview

Component	Recommended teaching hours
Core	**95**
1. Stoichiometric relationships	13.5
2. Atomic structure	6
3. Periodicity	6
4. Chemical bonding and structure	13.5
5. Energetics/thermochemistry	9
6. Chemical kinetics	7
7. Equilibrium	4.5
8. Acids and bases	6.5
9. Redox processes	8
10.Organic chemistry	11
11.Measurement and data processing	10
Option (choice of one out of four)	**15**
A. Materials	15
B. Biochemistry	15
C. Energy	15
D. Medicinal chemistry	15
Practical scheme of work	**40**
Prescribed and other practical activities	20
Individual investigation (internally assessed)	10
Group 4 project	10

The group 4 project

The group 4 project is a collaborative activity where students from different group 4 subjects, within or between schools, work together. It allows for concepts and perceptions from across disciplines to be shared while appreciating the environmental, social and ethical implications of science and technology. It can be practically or theoret-ically based and aims to develop an understanding of the relationships between scientific disciplines and their influence on other areas of knowledge. The emphasis is on interdisciplinary cooperation and the scientific processes.

III. Assessment model

It is the intention of this course that students are able to fulfill the following assessment objectives:

1. Demonstrate knowledge and understanding of:
   - facts, concepts, and terminology
   - methodologies and techniques
   - communicating scientific information.
2. Apply:
   - facts, concepts, and terminology
   - methodologies and techniques
   - methods of communicating scientific information.
3. Formulate, analyse and evaluate:
   - hypotheses, research questions and predictions
   - methodologies and techniques
   - primary and secondary data
   - scientific explanations.
4. Demonstrate the appropriate research, experimental, and person-al skills necessary to carry out insightful and ethical investigations.

Assessment at a glance

Type of assessment	Format of assessment	Time (hours)	Weighting of final grade (%)
External		3	80
Paper 1	30 multiple-choice questions (Core)	0.75	20
Paper 2	Short answer and extended response questions (Core)	1.25	40
Paper 3	Data- and practical-based questions, plus short answer and extended response questions on the option	1	20
Internal		10	20
Individual investigation	Investigation and write-up of 6 to 12 pages	10	20

IV. Sample questions

- What is the total number of atoms in 0.50 mol of 1,4-diaminobenzene, $H_2NC_6H_4NH_2$?
  A. 16.0×10^{23}
  B. 48.0×10^{23}
  C. 96.0×10^{23}
  D. 192.0×10^{23}

  (Avogadro's constant (L or N_A) = 6.0×10^{23} mol^{-1}.) (Paper 1)

- Many automobile manufacturers are developing vehicles that use hydrogen as a fuel.
  1. Suggest why such vehicles are considered to cause less harm to the environment than those with internal combustion engines.
  2. Hydrogen can be produced from the reaction of coke with steam: $C(s)+2H_2O(g) \rightarrow 2H_2(g)+CO_2(g)$

  Using information from section 12 of the data booklet, calculate the change in enthalpy, ΔH, in kJ mol^{-1}, for this reaction. (Paper 2)

International Baccalaureate Diploma Programme Subject Brief

Diploma Programme

Sciences:

Physics—Standard level

First assessments 2016

I. Course description and aims

Physics is the most fundamental of the experimental sciences as it seeks to explain the universe itself, from the very smallest particles to the vast distances between galaxies. Despite the exciting and extraordinary development of ideas throughout the history of physics, observations remain essential to the very core of the subject. Models are developed to try to understand observations, and these themselves can become theories that attempt to explain the observations.

Besides helping us better understand the natural world, physics gives us the ability to alter our environments. This raises the issue of the impact of physics on society, the moral and ethical dilemmas, and the social, economic and environmental implications of the work of physicists.

By studying physics students should become aware of how scientists work and communicate with each other. While the scientific method may take on a wide variety of forms, it is the emphasis on a practical approach through experimental work that characterizes the subject. Teachers provide students with opportunities to develop manipulative skills, design investigations, collect data, analyse results and evaluate and communicate their findings.

Through the overarching theme of the nature of science, the aims of the DP physics course are to enable students to:

1. appreciate scientific study and creativity within a global context through stimulating and challenging opportunities
2. acquire a body of knowledge, methods and techniques that characterize science and technology
3. apply and use a body of knowledge, methods and techniques that characterize science and technology
4. develop an ability to analyse, evaluate and synthesize scientific information
5. develop a critical awareness of the need for, and the value of, effec-tive collaboration and communication during scientific activities
6. develop experimental and investigative scientific skills including the use of current technologies
7. develop and apply 21st century communication skills in the study of science
8. become critically aware, as global citizens, of the ethical implica-tions of using science and technology
9. develop an appreciation of the possibilities and limitations of science and technology
10. develop an understanding of the relationships between scientific disciplines and their influence on other areas of knowledge.

II. Curriculum model overview

Component	Recommended teaching hours
Core	**95**
1. Measurements and uncertainties	5
2. Mechanics	22
3. Thermal physics	11
4. Waves	15
5. Electricity and magnetism	15
6. Circular motion and gravitation	5
7. Atomic, nuclear and particle physics	14
8. Energy production	8
Option (Choice of one out of four)	**15**
A. Relativity	15
B. Engineering physics	15
C. Imaging	15
D. Astrophysics	15
Practical scheme of work	**40**
Prescribed and other practical activities	20
Individual investigation (internally assessed)	10
Group 4 project	10

The group 4 project

The group 4 project is a collaborative activity where students from different group 4 subjects, within or between schools, work together. It allows for concepts and perceptions from across disciplines to be shared while appreciating the environmental, social and ethical implications of science and technology. It can be practically or theoretically based and aims to develop an understanding of the relationships between scientific disciplines and their influence on other areas of knowledge. The emphasis is on interdisciplinary cooperation and the scientific processes.

III. Assessment model

It is the intention of this course that students are able to fulfill the following assessment objectives:

1. Demonstrate knowledge and understanding of:
   - facts, concepts, and terminology
   - methodologies and techniques
   - communicating scientific information.
2. Apply:
   - facts, concepts, and terminology
   - methodologies and techniques
   - methods of communicating scientific information.
3. Formulate, analyse and evaluate:
   - hypotheses, research questions and predictions
   - methodologies and techniques
   - primary and secondary data
   - scientific explanations.
4. Demonstrate the appropriate research, experimental, and personal skills necessary to carry out insightful and ethical investigations.

Assessment at a glance

Type of assessment	Format of assessment	Time (hours)	Weighting of final grade (%)
External		3	80
Paper 1	30 multiple-choice questions	0.75	20
Paper 2	Short answer and extended response questions (Core)	1.25	40
Paper 3	Data- and practical-based questions plus, short answer and extended response questions on the option	1	20
Internal		10	20
Individual investigation	Investigation and write-up of 6 to 12 pages	10	20

IV. Sample questions

- An object falls freely from rest through a vertical distance of 44.0m in a time of 3.0s. What value should be quoted for the acceleration of free-fall? (Paper 1)
  A. $9.778 m s^{-2}$
  B. $9.780 m s^{-2}$
  C. $9.78 m s^{-2}$
  D. $9.8 m s^{-2}$

- There is a suggestion that the temperature of the Earth may increase if the use of fossil fuels is not reduced over the coming years. Explain, with reference to the enhanced greenhouse effect, why this temperature increase may occur. (Paper 2)

- In an experiment to measure the specific heat capacity of a metal, a piece of metal is placed inside a container of boiling water at 100°C. The metal is then transferred into a calorimeter containing water at a temperature of 10°C. The final equilibrium temperature of the water was measured. One source of error in this experiment is that the small mass of boiling water will be transferred to the calorimeter along with the metal.
  (a) Suggest the effect of the error on the measured value of the specific heat capacity of the metal
  (b) State one other source of error for this experiment (Paper 3)

International Baccalaureate Diploma Programme Subject Brief

Sciences: Sports, exercise and health science

First assessments: SL – 2014; HL - 2018

Diploma Programme

I. Course description and aims

Sports, exercise and health science (SEHS) is an experimental science course combining academic study with practical and investigative skills. SEHS explores the science underpinning physical performance and provides the opportunity to apply these principles. The course incorporates the disciplines of anatomy and physiology, biomechanics, psychology and nutrition. Students cover a range of core and option topics, and carry out practical (experimental) investigations in both laboratory and field settings. The course offers a deeper understanding of the issues related to sports, exercise and health in the 21st century and addresses the international dimension and ethics related to both the individual and global context.

Apart from being worthy of study in its own right, SEHS is good prepa-ration for courses in higher or further education related to sports fitness and health, and serves as useful preparation for employment in sports and leisure industries.

Both the SL and HL have a common core syllabus, internal assessment scheme, and overlapping elements in the options studied. While the skills and activities are common to all students, HL requires additional material and topics within the options.

Through studying any of the group 4 subjects, students should become aware of how scientists work and communicate, and the variety of forms of the "scientific method" with an emphasis on a practical approach through experimental work. In this context, the aims of SEHS is for students to:

- appreciate scientific study and creativity within a global context through stimulating and challenging opportunities
- acquire a body of knowledge, methods and techniques that characterize science and technology
- apply and use a body of knowledge, methods and techniques that characterize science and technologydevelop an ability to analyse, evaluate and synthesize scientific information
- develop a critical awareness of the need for, and the value of, effective collaboration and communication during scientific activities
- develop experimental and investigative scientific skills including the use of current technologies
- develop and apply 21st century communication skills in the study of science
- become critically aware, as global citizens, of the ethical implications of using science and technology
- develop an appreciation of the possibilities and limitations of science and technology
- develop an understanding of the relationships between scientific disciplines and their influence on other areas of knowledge.

III. Curriculum model overview

Syllabus component	Recommended teaching hours	
	SL	HL
Core		**80**
• Anatomy		7
• Exercise physiology		17
• Energy systems		13
• Movement analysis		15
• Skill in sports		15
• Measurement and evaluation of human performance.		13
Additional higher level (AHL)		**50**
• Further anatomy		7
• The endocrine system		7
• Fatigue		6
• Friction and drag		8
• Skill acquisition and analysis		9
• Genetics and athletic performance		7
• Exercise and immunity.		6
Options (Two of four)	**30**	**50**
• Optimizing physiological performance		
• Psychology of sports		
• Physical activity and health		
• Nutrition for sports, exercise and health.		
Practical work	**40**	**60**
• Investigations	20	40
• Group 4 project	10	10
• Individual investigation (internal assessment)	10	10
Total teaching hours	**150**	**240**

The group 4 project

The group 4 project is a collaborative activity where students from different group 4 subjects, within or between schools, work together. It allows for concepts and perceptions from across disciplines to be shared while appreciating the environmental, social and ethical implications of science and technology. It can be practically or theoretically based and aims to develop an understanding of the relationships between scientific disciplines and their influence on other areas of knowledge. The emphasis is on interdisciplinary cooperation and the scientific processes.

III. Assessment model

It is the intention of this course that students are able to fulfill the following assessment objectives:

1. **Demonstrate knowledge and understanding of:**
   - facts, concepts, and terminology
   - methodologies and techniques
   - communicating scientific information.
2. **Apply:**
   - facts, concepts, and terminology
   - methodologies and techniques
   - methods of communicating scientific information.
3. **Formulate, analyse and evaluate:**
   - hypotheses, research questions and predictions
   - methodologies and techniques
   - primary and secondary data
   - scientific explanations.
4. **Demonstrate the appropriate research, experimental, and personal skills necessary to carry out insightful and ethical investigations.**

Assessment at a glance

Type of assessment	Format of assessment	Time (hours)		Weighting of final grade (%)	
		SL	HL	SL	HL
External		3	4.5	80	80
Paper 1	**SL:** 30 multiple choice questions on the core. **HL:** 40 multiple choice questions on the core and the AHL.	0.75	1	20	20
Paper 2	One data-based and several short answer questions **SL:** one extended response question. **HL:** two of four extended response questions.	1.25	2.25	35	35
Paper 3	Several short answer questions in each of the two options. **HL:** additional extended response questions.	1	1.25	25	25
Internal		10	10	20	20
Individual investigation		10	10	20	20

IV. Sample questions

- At rest, the arterio-venous oxygen difference is approximately 5 mL of oxygen per 100 mL of blood. What happens to this figure when someone participates in moderately intense exercise?
- Outline the general characteristics that are common to muscle tissue.
- **(HL only)** outline the term talent.
- **(HL only)** explain factors that may affect progression through the stages of talent evolution for an athlete according to Bloom (1985) and Cole (1999).
- **(HL only)** outline talent transfer from gymnastics to high board diving.

International Baccalaureate Diploma Programme Subject Brief

Mathematics: analysis and approaches

First assessments for SL and HL—2021

I. Course description and aims

Individual students have different needs, aspirations, interests and abilities. For this reason there are two different DP subjects in mathematics, Mathematics: analysis and approaches and Mathematics: applications and interpretation. Each course is designed to meet the needs of a particular group of students. Both courses are offered at SL and HL.

The IB DP Mathematics: analysis and approaches course recognizes the need for analytical expertise in a world where innovation is increasingly dependent on a deep understanding of mathematics. The focus is on developing important mathematical concepts in a comprehensible, coherent and rigorous way, achieved by a carefully balanced approach. Students are encouraged to apply their mathematical knowledge to solve abstract problems as well as those set in a variety of meaningful contexts. Mathematics: analysis and approaches has a strong emphasis on the ability to construct, communicate and justify correct mathematical arguments. Students should expect to develop insight into mathematical form and structure, and should be intellectually equipped to appreciate the links between concepts in different topic areas. Students are also encouraged to develop the skills needed to continue their mathematical growth in other learning environments. The internally assessed exploration allows students to develop independence in mathematical learning. Throughout the course students are encouraged to take a considered approach to various mathematical activities and to explore different mathematical ideas.

The aims of all DP mathematics courses are to enable students to:

- develop a curiosity and enjoyment of mathematics, and appreciate its elegance and power
- develop an understanding of the concepts, principles and nature of mathematics
- communicate mathematics clearly, concisely and confidently in a variety of contexts
- develop logical and creative thinking, and patience and persistence in problem solving to instil confidence in using mathematics
- employ and refine their powers of abstraction and generalization
- take action to apply and transfer skills to alternative situations, to other areas of knowledge and to future developments in their local and global communities
- appreciate how developments in technology and mathematics influ-ence each other
- appreciate the moral, social and ethical questions arising from the work of mathematicians and the applications of mathematics
- appreciate the universality of mathematics and its multicultural, inter-national and historical perspectives
- appreciate the contribution of mathematics to other disciplines, and as a particular "area of knowledge" in the TOK course
- develop the ability to reflect critically upon their own work and the work of others
- independently and collaboratively extend their understanding of mathematics.

II. Curriculum model overview

Mathematics: analysis and approaches and Mathematics: applications and interpretation share 60 hours of common SL content.

Syllabus component	Recommended teaching hours	
	SL	HL
• Number and algebra	19	39
• Functions	21	32
• Geometry and trigonometry	25	51
• Statistics and probability	27	33
• Calculus	28	55
Development of investigational, problem-solving and modelling skills and the exploration of an area of mathematics	30	30
Total teaching hours	150	240

Mapping to two Maths offerings:

Application & Analysis v. Application & Interpretation

COMPONENT NAME	AA SL	AI SL	AA HL	AI HL
Number and Algebra	**19**	16	**39**	29
Functions	21	**31**	32	**42**
Geometry and Trigonometry	**25**	18	**51**	46
Statistics and Probability	27	**39**	33	**52**
Calculus	**28**	19	**55**	41

III. Assessment model

Problem-solving is central to learning mathematics and involves the acquisition of mathematical skills and concepts in a wide range of situations, including non-routine, open-ended and real-world problems.

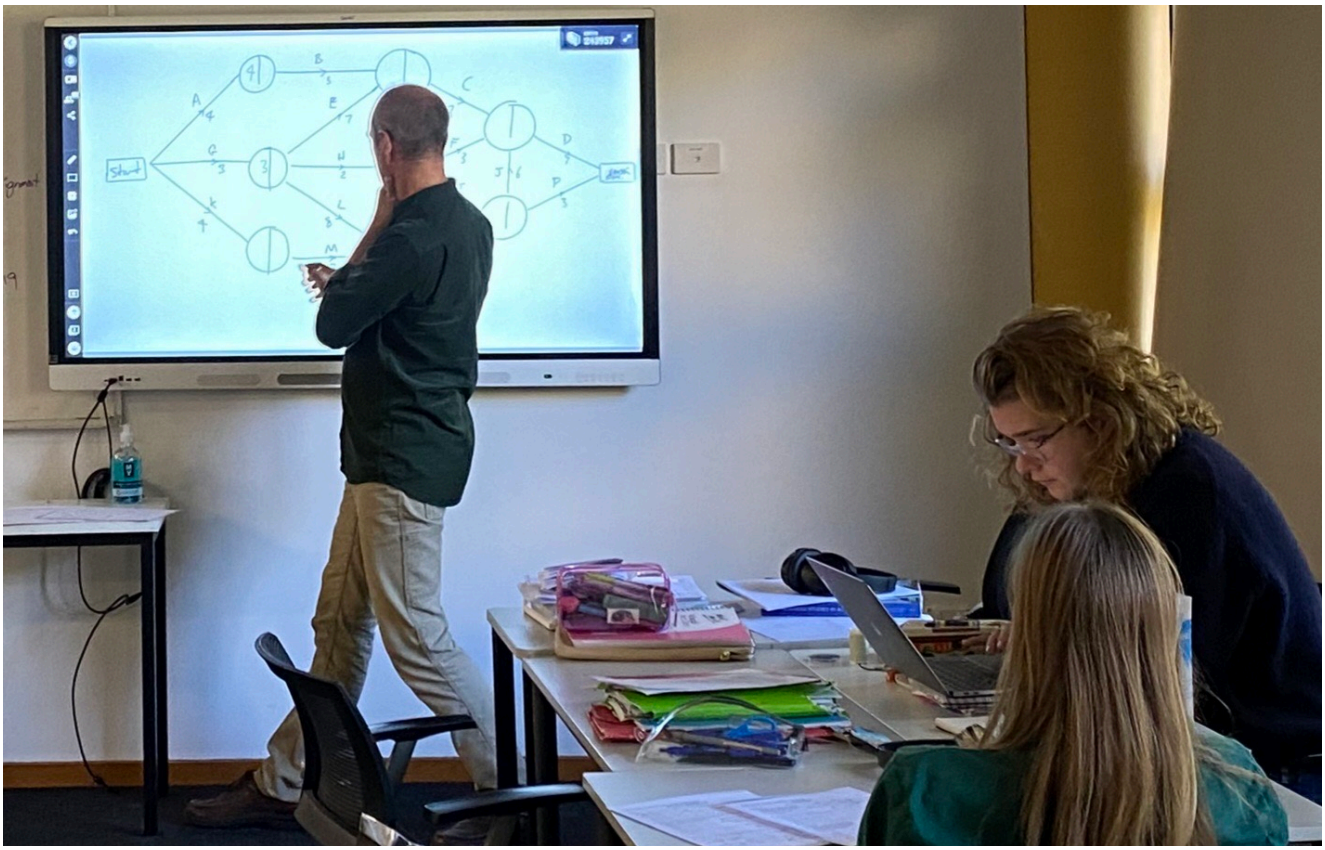
The assessment objectives are common to Mathematics: analysis and approaches and to Mathematics: applications and interpretation.

- **Knowledge and understanding:** Recall, select and use their knowledge of mathematical facts, concepts and techniques in a variety of familiar and unfamiliar contexts.
- **Problem solving:** Recall, select and use their knowledge of mathematical skills, results and models in both abstract and real-world contexts to solve problems.
- **Communication and interpretation:** Transform common realistic contexts into mathematics; comment on the context; sketch or draw mathematical diagrams, graphs or constructions both on paper and using technology; record methods, solutions and conclusions using standardized notation; use appropriate notation and terminology.
- **Technology:** Use technology accurately, appropriately and efficiently both to explore new ideas and to solve problems.
- **Reasoning:** Construct mathematical arguments through use of precise statements, logical deduction and inference and by the manipulation of mathematical expressions.
- **Inquiry approaches:** Investigate unfamiliar situations, both abstract and from the real world, involving organizing and analyzing information, making conjectures, drawing conclusions, and testing their validity.

The exploration is an integral part of the course and its assessment, and is compulsory for both SL and HL students. It enables students to demonstrate the application of their skills and knowledge, and to pursue their personal interests, without the time limitations and other constraints that are associated with written examinations.

Assessment at a glance

Type of assessment	Format of assessment	Time (hours)		Weighting of final grade (%)	
		SL	HL	SL	HL
External					
Paper 1	No technology allowed. **Section A:** compulsory short-response questions based on the syllabus. **Section B:** compulsory extended-response questions based on the syllabus.	1.5	2	40	30
Paper 2	Technology allowed. **Section A:** compulsory short-response questions based on the syllabus. **Section B:** compulsory extended-response questions based on the syllabus.	1.5	2	40	30
Paper 3	Technology allowed. Two compulsory extended-response problem-solving questions.		1		20
Internal					
Exploration		15	15	20	20



International Baccalaureate Diploma Programme Subject Brief

Mathematics: applications and interpretation

First assessments for SL and HL—2021

I. Course description and aims

Individual students have different needs, aspirations, interests and abilities. For this reason there are two different DP subjects in mathematics, Mathematics: analysis and approaches and Mathematics: applications and interpretation. Each course is designed to meet the needs of a particular group of students. Both courses are offered at SL and HL.

The IB DP Mathematics: applications and interpretation course recognizes the increasing role that mathematics and technology play in a diverse range of fields in a data-rich world. As such, it emphasizes the meaning of mathematics in context by focusing on topics that are often used as applications or in mathematical modelling. To give this understanding a firm base, this course includes topics that are traditionally part of a pre-university mathematics course such as calculus and statistics. Students are encouraged to solve real-world problems, construct and communicate this mathematically and interpret the conclusions or generalizations.

Students should expect to develop strong technology skills, and will be intellectually equipped to appreciate the links between the theoretical and the practical concepts in mathematics. All external assessments involve the use of technology. Students are also encouraged to develop the skills needed to continue their mathematical growth in other learning environments.

The internally assessed exploration allows students to develop independence in mathematical learning. Throughout the course students are encouraged to take a considered approach to various mathematical activities and to explore different mathematical ideas.

The aims of all DP mathematics courses are to enable students to:

- develop a curiosity and enjoyment of mathematics, and appreciate its elegance and power
- develop an understanding of the concepts, principles and nature of mathematics
- communicate mathematics clearly, concisely and confidently in a variety of contexts
- develop logical and creative thinking, and patience and persistence in problem solving to instil confidence in using mathematics
- employ and refine their powers of abstraction and generalization
- take action to apply and transfer skills to alternative situations, to other areas of knowledge and to future developments in their local and global communities
- appreciate how developments in technology and mathematics influence each other
- appreciate the moral, social and ethical questions arising from the work of mathematicians and the applications of mathematics
- appreciate the universality of mathematics and its multicultural, international and historical perspectives
- appreciate the contribution of mathematics to other disciplines, and as a particular "area of knowledge" in the TOK course
- develop the ability to reflect critically upon their own work and the work of others
- independently and collaboratively extend their understanding of mathematics.

II. Curriculum model overview

Mathematics: applications and interpretation and Mathematics: analysis and approaches share 60 hours of common content.

Syllabus component	Recommended teaching hours	
	SL	HL
• Number and algebra • Functions • Geometry and trigonometry • Statistics and probability • Calculus	16 31 18 36 19	29 42 46 52 41
Development of investigational, problem-solving and modelling skills and the exploration of an area of mathematics	30	30
Total teaching hours	150	240

Mapping to two Maths offerings:

Application & Analysis v. Application & Interpretation

COMPONENT NAME	AA SL	AI SL	AA HL	AI HL
Number and Algebra	**19**	16	**39**	29
Functions	21	**31**	32	**42**
Geometry and Trigonometry	**25**	18	**51**	46
Statistics and Probability	27	**39**	33	**52**
Calculus	**28**	19	**55**	41

III. Assessment model

Problem-solving is central to learning mathematics and involves the acquisition of mathematical skills and concepts in a wide range of situations, including non-routine, open-ended and real-world problems.

The assessment objectives are common to Mathematics: applications and interpretation and to Mathematics: analysis and approaches.

- **Knowledge and understanding:** Recall, select and use their knowledge of mathematical facts, concepts and techniques in a variety of familiar and unfamiliar contexts.
- **Problem solving:** Recall, select and use their knowledge of mathematical skills, results and models in both abstract and real-world contexts to solve problems.
- **Communication and interpretation:** Transform common realistic contexts into mathematics; comment on the context; sketch or draw mathematical diagrams, graphs or constructions both on paper and using technology; record methods, solutions and conclusions using standardized notation; use appropriate notation and terminology.
- **Technology:** Use technology accurately, appropriately and efficiently both to explore new ideas and to solve problems.
- **Reasoning:** Construct mathematical arguments through use of precise statements, logical deduction and inference and by the manipulation of mathematical expressions.
- **Inquiry approaches:** Investigate unfamiliar situations, both abstract and from the real world, involving organizing and analyzing information, making conjectures, drawing conclusions, and testing their validity.

The exploration is an integral part of the course and its assessment, and is compulsory for both SL and HL students. It enables students to demonstrate the application of their skills and knowledge, and to pursue their personal interests, without the time limitations and other constraints that are associated with written examinations.

Assessment at a glance

Type of assessment	Format of assessment	Time (hours)		Weighting of final grade (%)	
		SL	HL	SL	HL
External					
Paper 1	Technology allowed. Compulsory short-response questions based on the syllabus.	1.5	2	40	30
Paper 2	Technology allowed. Compulsory extended-response questions based on the syllabus.	1.5	2	40	30
Paper 3	Technology allowed. Two compulsory extended-response problem-solving questions.		1		20
Internal					
Exploration		15	15	20	20

International Baccalaureate
Diploma Programme Subject Brief

Theatre

First assessment 2024

Diploma Programme

I. Course description and aims

The IB Diploma Programme theatre course is a multifaceted theatre-making course. It gives students the opportunity to make theatre as creators, designers, directors and performers. It emphasizes the importance of working both individually and as part of an ensemble. It offers the opportunity to engage actively in the creative process of inquiring, developing, presenting and evaluating. Students are encouraged to work as inquisitive and imaginative artists, transforming ideas into action and communicating these to an audience.

Theatre students learn to apply research and theory to inform and contextualize their work as they experience the course through practical and physical engagement. They understand that knowledge resides in the body and that research can be conducted physically through both action and practice. In this respect, the theatre course encourages students to appreciate that through the processes of researching, creating, preparing, presenting and critically reflecting on theatre—as participants and spectators—they gain a richer understanding of themselves, their community and the world.

Through the study of theatre, students strengthen their awareness of their own personal and cultural perspectives, developing an appreciation of the diversity of theatre practices, their processes and their modes of presentation. This enables students to discover and engage with different forms of theatre across time, place and culture and promotes international-mindedness. Participation in the DP theatre course results in the development of both theatre and life skills; the building of confidence, imagination, creativity and a collaborative mindset.

The aims of the DP arts subjects (dance, film, music, theatre, visual arts and literature and performance) are to enable students to:

- explore the diversity of the arts across time, cultures and contexts
- develop as imaginative and skilled creators and collaborators
- express ideas creatively and with competence in forms appropriate to the artistic discipline
- critically refl ct on the process of creating and experiencing the arts
- develop as informed, perceptive and analytical practitioners
- enjoy lifelong engagement with the arts.

In addition, the aims of the theatre course at SL and HL are to enable students to:

- inquire into theatre and its contexts
- develop and practically apply theatre performance and production skills and elements, led by intentions
- create, present and evaluate theatre work both independently and collaboratively
- acquire the perspectives and intentions of an internationally-minded theatre-maker
- understand, appreciate and explore the relationship between theory and performance (HL only).

II. Curriculum

Syllabus	Teaching hours SL	Teaching hours HL
Staging play texts This area of the syllabus addresses the transformation of play texts into action. Students examine the ways in which ideas are articulated in texts by playwrights and the ways in which performance and production elements can be used to effectively fulfill theatre-maker intentions.	45	45
Exploring world theatre traditions This area of the syllabus addresses the authentic exploration of world theatre traditions through academic and practical research and exploration. Students inquire into and physically explore world theatre traditions, performance conventions and performance material from those traditions in order to acquire a deeper understanding and appreciation of the traditions through the body and/or voice.	45	45
Collaboratively creating original theatre This area of the syllabus addresses the collaborative development and performance of original theatre as part of an ensemble of theatre-makers. Students formulate intentions for theatre-making and examine the ways in which these intentions can be effectively realized through the collaborative creation of original performance work inspired by a starting point.	60	60
Performing theatre theory (HL only) This area of the syllabus addresses the exploration of aspects of theatre theory and the ways in which theory can inform performance. Students research at least one theatre theorist, identify an aspect of their theory and apply this to create and present theatre work that demonstrates this aspect of theory in performance.	X	90
Total teaching hours	**150**	**240**

III. Assessment model

Having followed the theatre course at SL or HL, students will be expected to fulfill the following objectives at assessment.

1. **Inquiry**
   a. Carry out academic and physical research and identify valuable information and resources to support work in theatre
   b. Inquire into, and contextualize, the theatrical work and ideas of others
2. **Development**
   a. Develop informed and imaginative theatre-maker intentions for making and staging theatre
   b. Practically and collaboratively explore how performance and production elements combine in practice to create effective moments of theatre
3. **Presentation**
   a. Present theatre work to others in order to fulfill theatre-maker intentions
   b. Communicate theatrical ideas in a variety of forms, formats and contexts
4. **Evaluation**
   a. Reflect on feedback from others and consider their own development as theatre-makers
   b. Evaluate the effectiveness of theatre work.

Assessment task	Assessment task details	SL	HL
	Internal		
Production proposal	Students at SL and HL choose a published play text they have not previously studied and formulate a vision for the design and theoretical staging of the entire play text for an audience. These ideas are presented in the form of a proposal. Each student submits the following. 1. A production proposal (a maximum of 12 pages of written text and images, with written text not exceeding 4,000 words) plus a list of all sources used.	30%	20%
	External		
Research presentation	Students at SL and HL plan, deliver and video record an individual research presentation (15 minutes maximum) in which they provide evidence of their academic and practical exploration and learning of a world theatre tradition they have not previously studied. Each student submits the following. 1. A video recording of the student's research presentation (15 minutes maximum). 2. A list of all sources cited and any additional resources used by the student during the presentation.	30%	20%
Collaborative project	Students at SL and HL collaboratively create and perform an original piece of theatre (lasting 7–10 minutes maximum) created from a starting point of their choice. The piece is presented to an audience as a fully-realized production. Each student submits the following. 1. A project report (a maximum of 10 pages of written text and images, with written text not exceeding 4,000 words) plus a list of all sources used. 2. A video recording of the final piece (7-10 minutes maximum).	40%	25%
Solo theatre piece (HL only)	Students at HL research a theatre theorist they have not previously studied, identify an aspect(s) of theory and create and present a solo theatre piece (lasting 4-7 minutes maximum) that demonstrates the practical application of this theory to a theatre piece for an audience. Each student submits the following. 1. A report (2,500 words maximum) plus a list of all primary and secondary sources cited. 2. A continuous unedited video recording of the whole solo theatre piece (4-7 minutes maximum).	X	35%

International Baccalaureate Diploma Programme Subject Brief

The arts:

Visual arts—Standard level

First assessments 2016

Diploma Programme

I. Course description and aims

The IB Diploma Programme visual arts course encourages students to challenge their own creative and cultural expectations and boundaries. It is a thought-provoking course in which students develop analytical skills in 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, students are expected to engage in, experiment with and critically reflect upon a wide range of contemporary practices and media. The course is designed for students who want to go on to study visual arts in higher education as well as for those who are seeking lifelong enrichment through visual arts.

The role of visual arts teachers should be to actively and carefully organize learning experiences for the students, directing their study to enable them to reach their potential and satisfy the demands of the course. Students should be empowered to become autonomous, informed and skilled visual artists.

The aims of the arts subjects are to enable students to:

1. enjoy lifelong engagement with the arts
2. become informed, reflective and critical practitioners in the arts
3. understand the dynamic and changing nature of the arts
4. explore and value the diversity of the arts across time, place and cultures
5. express ideas with confidence and competence
6. develop perceptual and analytical skills.

In addition, the aims of the visual arts course at SL and HL are to enable students to:

7. make artwork that is influenced by personal and cultural contexts
8. become informed and critical observers and makers of visual culture and media
9. develop skills, techniques and processes in order to communicate concepts and ideas.

II. Curriculum model overview

Component	Recommended teaching hours
Visual arts in context • Examine and compare the work of artists from different cultural contexts. • Consider the contexts influencing their own work and the work of others. • Make art through a process of investigation, thinking critically and experimenting with techniques. • Apply identified techniques to their own developing work. • Develop an informed response to work and exhibitions they have seen and experienced. • Begin to formulate personal intentions for creating and displaying their own artworks.	**50**
Visual arts methods • Look at different techniques for making art. • Investigate and compare how and why different techniques have evolved and the processes involved. • Experiment with diverse media and explore techniques for making art. • Develop concepts through processes informed by skills, techniques and media. • Evaluate how their ongoing work communicates meaning and purpose. • Consider the nature of "exhibition" and think about the process of selection and the potential impact of their work on different audiences.	**50**
Communicating visual arts • Explore ways of communicating through visual and written means. • Make artistic choices about how to most effectively communicate knowledge and understanding. • Produce a body of artwork through a process of reflection and evaluation, showing a synthesis of skill, media and concept. • Select and present resolved works for exhibition. • Explain the ways in which the works are connected. • Discuss how artistic judgments impact the overall presentation.	**50**

Throughout the course students are required to maintain a visual arts journal. Although sections of the journal will be selected, adapted and presented for assessment, the journal itself is not directly assessed or moderated. It is, however, regarded as a fundamental activity of the course.

III. Assessment model

Having followed the visual arts course, students are expected to:

Demonstrate knowledge and understanding of specified content

- Identify various contexts in which the visual arts can be created and presented
- Describe artwork from differing contexts, and identify the ideas, conventions and techniques employed by the art-makers
- Recognize the skills, techniques, media, forms and processes associated with the visual arts
- Present work, using appropriate visual arts language, as appropriate to intentions

Demonstrate application and analysis of knowledge and under-standing

- Express concepts, ideas and meaning through visual communication
- Analyse artworks from a variety of different contexts
- Apply knowledge and understanding of skills, techniques, media, forms and processes related to art-making

Demonstrate synthesis and evaluation

- Critically analyse and discuss artworks created by themselves and others and articulate an informed personal response
- Formulate personal intentions for the planning, development and making of artworks that consider how meaning can be conveyed to an audience
- Demonstrate the use of critical reflection to highlight success and failure in order to progress work
- Evaluate how and why art-making evolves and justify the choices made in their own visual practice

Select, use and apply a variety of appropriate skills and techniques

- Experiment with different media, materials and techniques in art-making
- Make appropriate choices in the selection of images, media, materials and techniques in art-making
- Demonstrate technical proficiency in the use and application of skills, techniques, media, images, forms and processes
- Produce a body of resolved and unresolved artworks as appropriate to intentions

Assessment at a glance

Type of assessment	Format of assessment	Weighting of final grade (%)
External		60
Comparative study	• 10–15 screens which examine and compare at least 3 artworks, at least 2 of which should be by different artists • A list of sources used	20
Process portfolio	• 9–18 screens which evidence the student's sustained experimentation, exploration, manipulation and refinement of a variety of art-making activities	40
Internal		40
Exhibition	• A curatorial rationale that does not exceed 400 words • 4–7 artworks • Exhibition text (stating the title, medium, size and intention) for each artwork	40

International Baccalaureate Diploma Programme Subject Brief

The arts: Music

First assessment 2022

I. Course description and aims

The Diploma Programme Music course (for first teaching from 2020) has been designed to prepare the 21st century music student for a world in which global musical cultures and industries are rapidly changing.

The course is grounded in the knowledge, skills and processes associated with the study of music and offers a strengthened approach to student creativity through practical, informed and purposeful explorations of diverse musical forms, practices and contexts. The course also ensures a holistic approach to learning, with the roles of performer, creator and researcher afforded equal importance in all course components.

The aims of the music course are to enable students to:

- explore a range of musical contexts and make links to, and between, different musical practices, conventions and forms of expression
- acquire, develop and experiment with musical competencies through a range of musical practices, conventions and forms of expression, both individually and in collaboration with others
- evaluate and develop critical perspectives on their own music and the work of others.

Alignment with DP arts courses

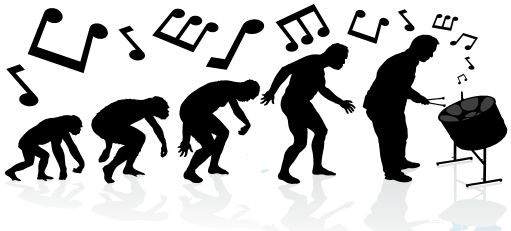
The curriculum moves into alignment with other DP arts courses, through the clear articulation of the balance between the theoretical and practical disciplines of music. A new set of assessment tasks that link directly to the processes and roles experienced in the curriculum have been developed. These robust tasks address the concept of holistic musical development by removing optionality (and thereby the possibility to specialize in one skill at the expense of others) and incorporating practical music-making into all tasks. Assessment tasks are now presented as coursework, balanced between internal and external assessment. There are three common components at SL and HL, with a discrete HL extension component which invites students to work within the parameters of real-life music industry practices.

Engagement with diverse musical material

The new course seeks to be inclusive of students with wide-ranging personal and cultural musical backgrounds. In place of prescribed musical content, students and teachers in the new course have the agency to personalise unique approaches to musical forms, genres and pieces. The exploration of diverse musical material is focused through the lenses of four areas of inquiry.

- Music for sociocultural and political expression
- Music for listening and performance,
- Music for dramatic impact, movement and entertainment
- Music technology in the electronic and digital age.

Connect theoretical studies to practical work to gain a deeper understanding of the music they engage with.



Engage with a diverse range of music that will broaden their musical horizons and provide stimuli to expand their own music-making

Communicate and present music as researchers, creators and performers.

A framework for study and assessment

Engagement with these areas of inquiry takes place across three contexts—personal, local and global. These contexts invite students to move beyond familiar musical material (personal context), to experience music from the culture or community around them (local context), as well as engaging with previously unfamiliar music (global context). Combined with the contexts, the areas of inquiry offer a "matrix" onto which students can plot the variety of their musical encounters. This new flexibility is not only about choice in the learning, teaching and assessment—it is also about forging deep, life-long connections between students' passions and interests and the wider world of music and music-making. All musical encounters are experienced in the roles of researcher, creator and performer, and are related through teaching and assessment to the processes of exploring, experimenting and presenting music. Academic rigour is assured through the requirement for students to critically analyse the music with which they engage, drawing information and conclusions which they then apply to their own practical music making through creating and performing.

By the end of the course students will have:

- broadened their musical horizons through engagement with diverse musical material
- analysed a wide range of music
- engaged with music technology as a compulsory part of the course
- gained confidence in the essential processes associated with music-making
- developed as holistic musicians with experience as creators and performers
- developed both independent and collaborative working skills
- honed their inquiry, reflection and critical thinking skills.

The course is ideal for students who ...

- are interested in both the practical and theoretical aspects of music-making
- respond to a creative approach to composition and performance
- value collaboration
- wish to experience a DP arts course
- plan to study music in university or college.

II. Curriculum model overview

Syllabus component	Teaching hours	
	SL	HL
Exploring music in context Students will learn how to engage with a diverse range of music that will broaden their musical horizons and provide stimuli to expand their own music-making. They will demonstrate diversity and breadth in their exploration by engaging with music from the areas of inquiry in personal, local and global contexts.	45	45
Experimenting with music Students connect theoretical studies to practical work and gain a deeper understanding of the music they engage with. Through this theoretical and practical work as researchers, creators and performers, they will learn to experiment with a range of musical material and stimuli from the areas of inquiry across local and global contexts.	45	45
Presenting music Students learn to practise and prepare finished pieces that will be performed or presented to an audience. In working towards completed musical works, they expand their musical identity, demonstrate their level of musicianship, and learn to share and communicate their music as researchers, creators and performers.	60	60
The contemporary music maker (HL only) Music at higher level (HL) builds on the learning of musical competencies and challenges students to engage with the musical processes in settings of contemporary music-making. For the HL component, students plan and collaboratively create a project that draws on the competencies, skills and processes in all of the musical roles of the music course and is inspired by real-life practices of music-making.	n/a	90
Total teaching hours	**150**	**240**

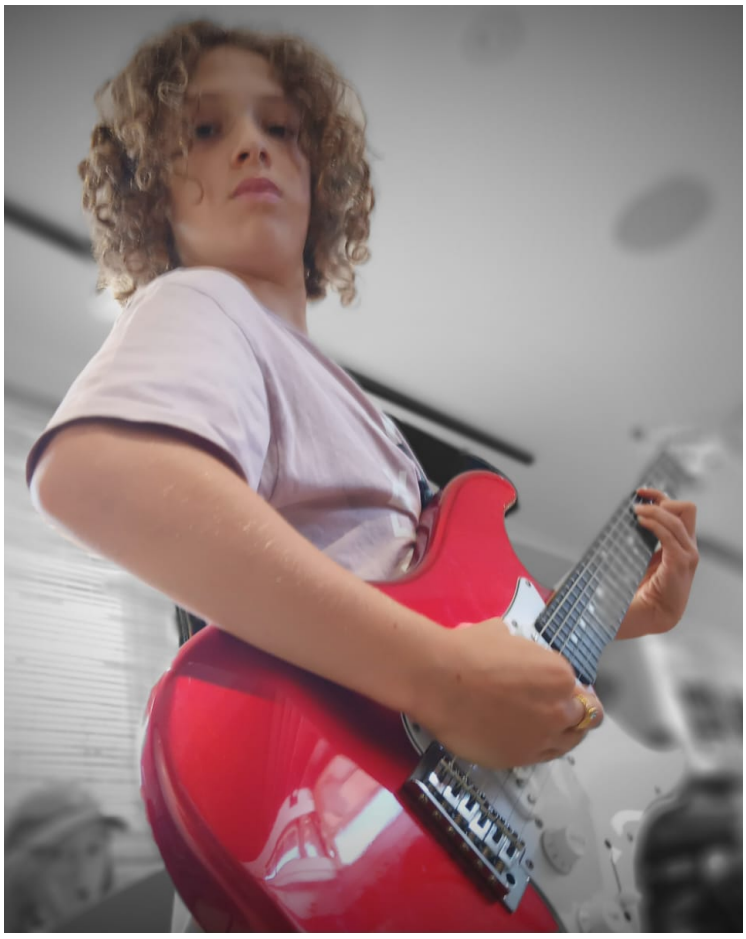
How are music students assessed?

Students at SL and HL submit the following common assessment tasks.

- **An exploration portfolio:** Written work demonstrating engagement with, and understanding of, diverse musical material, along with practical exercises in creating and performing
- **An experimentation report:** Written work in the form of a rationale and commentary that supports practical musical evidence of experi-mentation in creating and performing
- **A musical presentation:** Finished works in creating and performing, supported by programme notes.

In addition, HL students will submit the following project.

A collaborative project: A continuous multimedia presentation documenting a real-life project, containing evidence of the project proposal, the process and evaluation, and the realized project, or curated selections of it.



III. Assessment model

	External/ internal	SL	HL
Exploring music in context Students select samples of their work for a portfolio submission. Students submit: a) written work demonstrating engagement with, and understanding of, diverse musical material b) practical exercises in creating and performing	External	30%	20%
Experimenting with music Students submit an experimentation report with evidence of their musical processes in creating and performing in two areas of inquiry in a local and/or global context. The report provides a rationale and commentary for each process. Students submit: a) a written experimentation report that supports the experimentation b) practical musical evidence of the experimentation process in creating and performing	Internal	30%	20%
Presenting music Students submit a collection of works demonstrating engagement with diverse musical material from four areas of inquiry. The submission contains: a) Programme notes b) Presenting as a creator: composition and/or improvisation c) Presenting as a performer: solo and/or ensemble	External	40%	30%
The contemporary music-maker (HL only) Students submit a continuous multimedia presentation documenting their real-life project which evidences: a) the project proposal b) the process and evaluation c) the realized project, or curated selections of it.	Internal		30%
		100%	100%

For more details, call us on **(02) 5632 1218,**
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