INTERNATIONAL BACCALAUREATE

A bilingual diploma

INSTITUT FLORIMONT

Is the IB for me?

- In class, I frequently find myself drawn to exploring the bigger ideas behind the topics being studied
- I enjoy questioning why and how we learn
- I find it exciting to seek out and make new connections between what I am learning in different subjects
- I enjoy discovering and discussing different points of view
- I want to feel like I am part of a community at Florimont, to which I actively contribute creatively and through service
- I prefer focusing on a few, chosen subjects in depth, balancing my academic studies with outside creative endeavors, physical activities, and service projects
- Class environments which encourage questioning, discussion, and collaborative construction of learning invigorate and challenge me
- I appreciate the flexibility and independent nature of choosing my own topics for further study
- I actively seek out feedback from teachers in order to address areas for improvement and how to become a stronger learner
- The world around us intrigues me and I enjoy bringing that context into my classroom learning

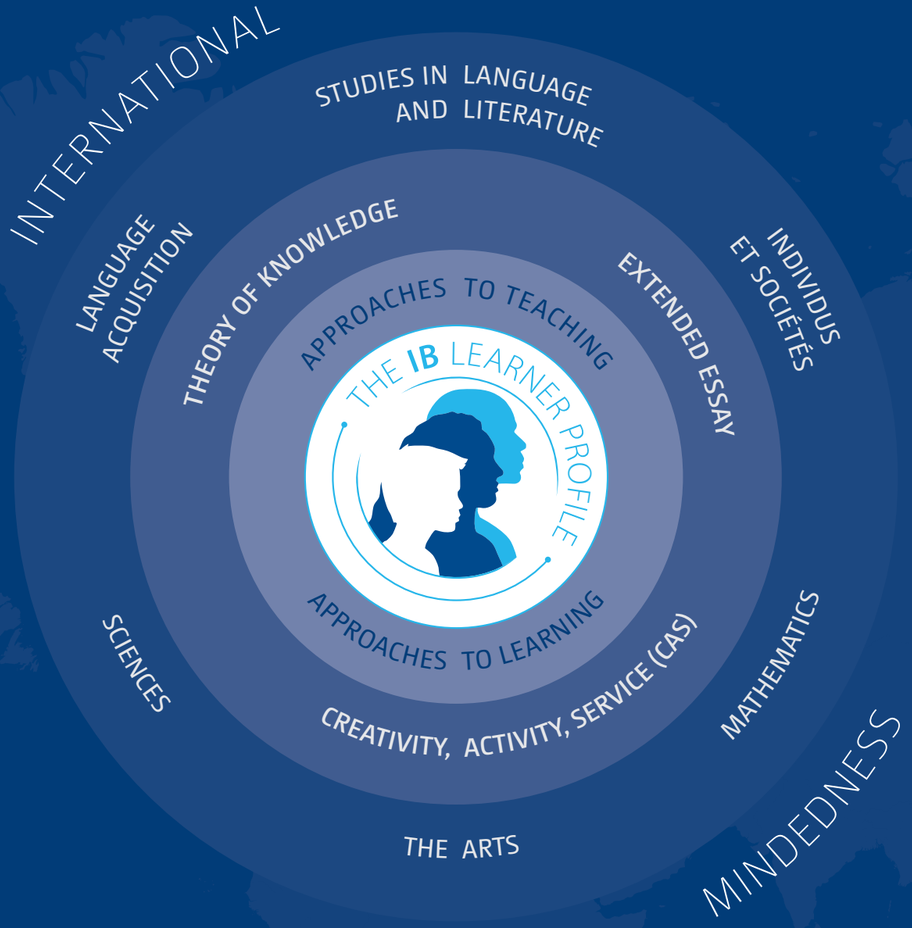
"The IB Diploma prepares students for the realities of university study and life beyond more so than any other course I have taught. Fundamentally it nurtures a curiosity about the world and how academic study is relevant to real life applications, and builds confidence and independence."
- Maurice Fakoury, IB Teacher

"Enrolling him in the international section at Florimont and now IB diploma programme has been the best decision for our son. He has grown and matured tremendously over the past three years. He had always been a very good student but now he is much more self-motivated, organized and eager to learn, and most importantly he has developed strong inquisitive and self reflection skills that we know will help him later in life. The small class size has allowed him to develop very positive relationships with his teachers and classmates. He definitely isn't "just another student." He has the full support of his teachers, form tutor and the administration."
- Catherine De Clerck, IB Parent

IB DIPLOMA PROGRAM

IB LEARNER PROFILE IS WHAT WE AIM FOR

"The learner profile is the IB's mission in action. It requires IB learners to strive to become: Inquirers, knowledgeable, thinkers, communicators, principled, open-minded, caring, risk-takers, balanced, reflective. The IB learner profil represents 10 attributes valued by IB World Schools. We believe these attributes, and others like them, can help individuals and groups become responsible members of local, national and global communities." (ibo.org)



INTERNATIONAL MINDEDNESS IS WHAT CONNECTS EVERY LAYER OF THE PROGRAMME

"International mindedness can be expressed as the ability to be better prepared for the 21st century global challenges, understanding ourselves to connect with others, awareness that the world is much larger than the community in which we live, respect and understanding for other perspectives, cultures and languages, the ability to see oneself as a responsible member of the community and a global citizen" - ibo.org

THE APPROACHES

APPROACHES TO TEACHING

- Inquiry-based
- Focused on conceptual understanding
- Developed in local and global contexts
- Focused on effective teamwork and collaboration
- Differentiated to meet the needs of all learners
- Utilizing Technology

APPROACHES TO LEARNING

- Thinking skills
- Communication skills
- Social skills
- Self-management skills
- Research skills

THE IB CORE AIMS TO BRODEN STUDENTS' EDUCATIONAL EXPERIENCE AND CHALLENGE THEM TO APPLY THEIR KNOWLEDGE AND SKILLS

THEORY OF KNOWLEDGE

"TOK plays a special role in the Diploma Programme by providing an opportunity for students to reflect on the nature of knowledge. The task of TOK is to emphasize connections between areas of knowledge and link them to the knower in such a way that the knower can become aware of his or her own perspectives and those of the various groups whose knowledge he or she shares. TOK, therefore, explores both the personal and shared aspects of knowledge and investigates the relationships between them." Key Question(s): What do we know, and how do we know it?

CAS

CAS stands for Creativity, Activity and Service! The aim of this programme is to guide IB students in becoming reflective learners and active participants of their community.
→It's about engaging in activities and reflecting on the experiences.
→It's about looking for new challenges, taking responsibilities, reflecting on learning.

EXTENDED ESSAY

"The extended essay offers the opportunity for IB students to investigate a topic of special interest, in the form of a 4,000-word piece of independent research...[it is] a major piece of formally presented, structured writing, in which ideas and findings are communicated in a reasoned and coherent manner, appropriate to the subject...chosen. It is intended to promote high-level research and writing skills, intellectual discovery and creativity."

GROUPS AND COURSES OFFERED
All courses are offered at both levels, HL and SL

Group 1 - Studies in Language and Literature
- English A Language and literature
- French A Literature

Group 2 - Language Acquisition
- English B , French B, German B, Spanish B, Chinois B

Group 3 - Individuals and Societies
- Business Management (Eng.), Economics (Eng.), Geography (Fr.), History (Eng.)

Group 4 - Sciences
- Biology (fr.), Chemistry (Eng.) and Physics (Eng.)

Group 5 - Mathematics
- Math Application and Interpretation (Fr.) only offered at the SL level
- Math Analysis and Approaches (Fr.)

Group 6 - Arts
- Visual Arts (Fr.)

How Florimont supports IB Diploma candidates

Integration into a supportive learning community of fellow students and engaged, committed teachers.

As individual challenges and strengths are identified, differentiated curriculum assistance is provided by the IB team, allowing each student to set individual goals.

Small class sizes are prioritized to ensure increased individualized learning, regular opportunities for discussion, and detailed feedback from experienced IB teachers.

Tutors monitor and foster students' academic development in a small group setting and regular one-to-one meetings, promoting communication between teachers, students, and parents.

The CAS Coordinator facilitates student engagement in Creativity, Activity, and Service experiences both in and out of school. Through active participation and regular feedback in CAS, students learn to reflect on themselves as individuals as well as their role in our local and global community, integrating the holistic, balanced goals of the IB.

Collaboration and independent study outside of class hours is facilitated in designated study areas. Student delegates, elected by each form class, allow for fluid communication and enable students to have a clear voice in their academic education.

« L'IB est plus qu'un examen de fin d'études. C'est une ouverture sur le monde de demain. A Florimont, on prépare nos enfants pour leurs études supérieures avec bienveillance et sérieux. Une famille scolaire se construit sous nos yeux de parents et c'est ça le plus important. »
- Catherine Mugnier Jacob, IB Parent

Subject-specific Extended Essay supervisors are provided for each student to accompany them through this challenging and rewarding diploma requirement.

Dedicated and focused university counsellors guide students throughout their search, application, and acceptance for both Francophone and Anglophone universities.

The IB Coordinator provides individual support to all students in the spirit of the IB philosophy, encouraging them to develop the traits of the IB learner profile. The Coordinator also personally advices students on course selection to maximize student success, working daily with the IB team of teachers and advisors to support student learning and development.

The IB Learner Profile

Inquirers
We nurture our curiosity, developing skills for inquiry and research. We know how to learn independently and with others. We learn with enthusiasm and sustain our love of learning throughout life.

Knowledgeable
We develop and use conceptual understanding, exploring knowledge across a range of disciplines. We engage with issues and ideas that have local and global significance.

Thinker
We use critical and creative thinking skills to analyse and take responsible action on complex problems. We exercise initiative in making reasoned, ethical decisions.

Communicators
We express ourselves confidently and creatively in more than one language and in many ways. We collaborate effectively, listening carefully to the perspectives of other individuals and groups.

Principled
We act with integrity and honesty, with a strong sense of fairness and justice, and with respect for the dignity and rights of people everywhere. We take responsibility for our actions and their consequences.

Open-minded
We critically appreciate our own cultures and personal histories, as well as the values and traditions of others. We seek and evaluate a range of points of view, and we are willing to grow from the experience.

Caring
We show empathy, compassion and respect. We have a commitment to service, and we act to make a positive difference in the lives of others and in the world around us.

Risk-takers
We approach uncertainty with forethought and determination; we work independently and cooperatively to explore new ideas and innovative strategies. We are resourceful and resilient in the face of challenges and change.

Balanced
We understand the importance of balancing different aspects of our lives—intellectual, physical, and emotional—to achieve well-being for ourselves and others. We recognize our interdependence with other people and with the world in which we live.

Reflective
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.

"The programme of support at Florimont, which scaffolds research and writing skills, forms the very same building blocks of academic rigour that enable our students to 'stand on the shoulders of giants' at university level."
- Daniel Eves, Teaching and Learning Coordinator

Becoming an IB Diploma candidate

In the Diploma Programme, the curriculum consists of six subject groups and the three elements of the IB Core.
To register in 1IB as an IB Diploma Candidate you need to meet the following requirements:

- Choose courses from the following subject groups: studies in Language and Literature, Language Acquisition, Individuals and Societies, Sciences, Mathematics, and the Arts.
- You may opt to study an additional course in Sciences, Individuals and Societies, or Languages, instead of a course in the Arts.
- You will take some subjects at higher level (HL) and some at standard level (SL). HL and SL courses differ in scope but are measured according to the same grade descriptors, with the expectation of demonstrating a greater body of knowledge, understanding and skills at higher level.
- You need to take at least three (but not more than four) subjects at higher level, and the remaining at standard level.
- Standard level subjects require up to 150 teaching hours. Higher level comprises 240 teaching hours.
- You can select English or French as your preferred language of instruction for Theory of Knowledge.

Different combinations of courses may qualify for a bilingual or advanced bilingual diploma. (ibo.org)

Examples of course selection

Group	Subject	Level	Lang.
1	English A, Language and Literature	HL	
2	French B	HL	
3	Business Management	SL	Eng.
4	Biology	SL	Fr.
5	Math Analysis & Approaches	SL	Fr.
6	Visual Arts	HL	Fr.
IB CORE	**Theory of knowledge**		**Eng.**

Group	Subject	Level	Lang.
1	French A, Literature	HL	
1	English A, Language and Literature	HL	
2	Economics	SL	Eng.
3	Physics	SL	Eng.
4	Chemistry	SL	Eng.
5	Math Analysis & Approaches	HL	Fr.
IB CORE	**Theory of knowledge**		Fr.

Bilingual Diploma Candidate Requirements

- Two languages selected from the subject group studies in language and literature, **or**
- A course selected in the subject groups individuals and societies or sciences in a language different to the language chosen in the subject group studies in language and literature.

Advanced Bilingual Diploma Candidate Requirements

- Two languages selected from the subject group studies in language and literature, **and**
- A course selected in the subject groups individuals and societies or sciences in a language different to the language chosen in the subject group studies in language and literature.

Assessments & exams

The International Baccalaureate® (IB) assesses student work as direct evidence of achievement against the stated goals of the Diploma Programme (DP) courses.

DP assessment procedures measure the extent to which students have mastered advanced academic skills in fulfilling these goals, for example:
– analysing and presenting information
– evaluating and constructing arguments
– solving problems creatively

Basic skills are also assessed, including:
– retaining knowledge
– understanding key concepts
– applying standard methods

In addition to academic skills, DP assessment encourages an international outlook and intercultural skills, wherever appropriate. Student results are determined by performance against set standards, not by each student's position in the overall rank order.

Two types of assessments:
External assessments are scheduled during an examination period of 3 weeks in May or November and form the basis of assessment for most courses. They include essays, structured problems, short-response questions, data-response questions, text-response questions, case-study questions, multiple-choice questions – in sciences.

Internal Assessments include oral work in languages, fieldwork in geography, laboratory work in the sciences, investigations in mathematics, artistic performances. The work is produced by students during the two year program, and is then evaluated by Florimont teachers. Samples are sent to the IB for moderation.

Grading Scales & points

In the DP, students receive grades, on each DP course, ranging from 7 to 1, with 7 being highest. The grades are established using a rubric based on a set of IB standards. A student's final diploma result score is made up of the combined scores for each subject. The diploma is awarded to students who gain at least 24 points, subject to certain minimum levels of performance including successful completion of the three essential elements of the DP core. For the Extended Essay and the Theory of Knowledge students receive a grade ranging from A to E, with A being the highest. The total IB Core Bonus points are calculated using this grid:

Theory of Knowledge

Extended Essay	A	B	C	D	E	No sub.
A	3	3	2	2		N
B	3	2	2	1		N
C	2	2	1	0		N
D	2	1	0	0		N
E	1+ failing condition					N
No sub.	N	N	N	N	N	N

University requirements for IB Diploma students are usually expressed as a minimum number of points to achieve and/or a specific combination of IB courses.

The total possible points for DP subjects is 42, added to the 3 possible bonus points, give a maximum possible score for the IB Diploma of 45 points.

Getting the Diploma

Accumulate at least 24 points and…

- Meet the CAS requirements in full
- No "N" (no submission) awarded for TOK, the EE or for a contributing subject
- No grade E awarded for TOK and/or the EE
- No grade 1 awarded in a subject/level
- No more than two grade 2s awarded (HL or SL)
- No more than four grade 3s or below awarded (HL or SL)
- The candidate has earned 12 points or more on HL subjects. (For candidates who register for four HL subjects, the three highest grades count.)
- The candidate has gained 9 points or more on SL subjects. (Candidates who register for two SL subjects must gain at least 5 points at SL.)
- Candidates who complete the diploma in multiple languages may be eligible for a bilingual diploma.

FAQ – IB Universities

Can you give a specific example of how the DP prepares students for college?
The International Baccalaureate® (IB), and the Diploma Programme (DP) in particular, enjoys a high level of respect and recognition among the world's higher education institutions. For students, success in the IB often results in advanced standing, course credit, scholarships, and other admissions related benefits at many universities.

How can I learn more about the IB and DP?
– Visit the IB website at www.ibo.org
– Attend school meetings and events
– Speak with your school's DP coordinator
– Speak with your child's DP classroom teachers

Are IB programmes considered "gifted" programmes?
The IB does not control how schools designate their Diploma Programme. In some instances, schools choose to designate the programme as selective enrolment via application or as a magnet programme. In other cases, the programme is open to any student.

Do DP teachers receive special training?
All DP teachers receive professional development in the IB's approaches to teaching and approaches to learning from certified IB workshop leaders. This is a requirement for IB World Schools implementing the DP.

What are the differences between Language A and Language B?
Language B courses are intended for students who have had some previous experience of learning the language. Available at either higher level or standard level. Language A is intended for students fluent in that language. If a student takes two Language A courses, they become eligible for a Bilingual Diploma. The courses are available at either higher level or standard level.

What's the difference between the diploma and certificates?
Not all students choose to take the full course load leading to a diploma. Instead, some take a few DP courses in areas where they have a particular interest or strength, similar to honours and Advanced Placement classes. Certificates are awarded on a course-by-course basis to students who choose not to do the full programme. Students who satisfactorily complete a DP course earn a certificate and may be eligible for university credit.

How do colleges and universities view the Diploma Programme?
The DP is internationally recognised as representing one of the highest standards in university preparatory education. More than 1,000 colleges and universities in North America have recognition policies on how they weigh it in admissions, advanced standing, college credit and scholarships. A list of colleges and universities that grant credit, scholarships and/or advanced standing for DP diplomas and certificates is available at www.ibo.org.

What kind of student is a good candidate for the DP?
The DP is a rigorous course of study for motivated students. That said, prior academic success is less an indicator of ability to earn the diploma than are a student's determination to do his or her best, willingness to be organised in order to complete the work while leading a full, balanced life, and a strong commitment to learning in and beyond the classroom.

Do DP students have time for anything beyond academics?
Absolutely. Most successful Diploma Programme students lead very full lives. They are often members of athletic teams and involved in a wide range of activities. Time management and organisation are key skills the IB develops in students.

"Since beginning to teach the IB I have never been so aware of the importance of asking the questions "why does this matter?" and "what difference does this make?" (as well as "how do we know this?"). Education can be a meaningless set of hoops to jump through for students and teachers, but if the IB is taught mindfully and intelligently, this mindless, grade-based approach can be avoided. Grades are important, but creating a better world is better! I am spoiled to be teaching thoughtful, reflective, knowledgeable students who rise to the challenge of a rigorous and well thought out DP curriculum in the DP. Teaching the IB has changed me and my students! And as a university counsellor I am very aware of just how valued the IB is by the world's best universities."
- Duncan Lally, University Counsellor

Glossary

English terms		French terms	
IA	Internal Assessment	RI ou EI	Evaluation interne ou Recherche Individuelle
CAS	Creativity, Activity and Service	CAS	Creativité, Activité et Service
EE	Extended Essay 4000 word research paper	Mémoire	Travail de recherche de 4000 mots
IOC	Individual Oral Commentary	IOC	Examen Oral Individuel
Group 4 project	Collaborative project between all sciences	Projet Groupe 4	Projet collaboratif entre toutes les sciences
Exploration	Internal Assessment in mathematics or geography	Exploration	Evaluation interne en mathématiques ou en géographie
Paper 1, 2, 3	External Assessment papers	Papier 1, 2, 3	Désignation des différentes evaluation externes
TOK	Theory of Knowledge	TDC	Théorie de la Connaissance
CORE	CAS, EE, TOK	Tronc commun	CAS, Mémoire, TDC
HL	Higher Level	NS	Niveau Supérieur
SL	Standard Level	NM	Niveau Moyen

For more information about the IB diploma program, please visit www.ibo.org.

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INSTITUT FLORIMONT

DIPLOMA PROGRAMME SUBJECT BRIEFS

Extracted from the IBO website

June 2020

INSTITUT FLORIMONT

The International Baccalaureate

Diploma Programme grade descriptors

The IB Diploma Programme (DP) is a rigorous, academically challenging and balanced two-year programme of education designed to prepare students aged 16 to 19 for success at university and in life beyond. The DP provides opportunities to develop both disciplinary and interdisciplinary understanding that meets rigorous standards. It encourages students to be knowledgeable, inquiring, caring and compassionate, and to develop intercultural understanding, open-mindedness and the attitudes necessary to respect and evaluate a range of viewpoints.

The DP uses both internally and externally assessed components to assess student performance. Externally marked summative assessments at the end of the course typically make up around 80% of the student's final course grade, although internally marked formative and summative assessments can account for as much as 50% of the grade for some courses. The marks awarded for each course range from 1 (lowest) to 7 (highest), and are awarded based on the extent to which students master basic and advanced academic skills, such as:

- knowledge and understanding of content and concepts
- critical thinking, reflective, research and independent learning skills
- application of standard methods
- analysing and presenting information
- evaluating and constructing arguments
- creative problem-solving
- intercultural understanding and international outlook.

The following grade descriptors are a compilation of the characteristics of performance at each grade for DP courses in general, and are intended to help explain the academic achievement required to achieve a particular grade. Examiners use the individual subject group descriptors when determining grade boundaries for examination papers and coursework components, and when marking student work. More detailed subject group grade descriptors can be found at: **http://bit.ly/1BtjkJb**

Any descriptor of student achievement should be considered in conjunction with relevant information related to the curriculum and assessment components of a given course. Further information about DP courses can be found at: **http://www.ibo.org/en/programmes/diploma-programme/**

International Baccalaureate®
Baccalauréat International
Bachillerato Internacional

The descriptors

7 The student demonstrates excellent content knowledge and understanding, conceptual and contextual awareness and critical, reflective thinking. Highly effective research, investigation and technical skills are evident, as is the ability to analyse, evaluate and synthesize qualitative and quantitative evidence, knowledge and concepts to reach valid conclusions or solve problems. In collaborative exercises, the student works very well with others, ethically and responsibly, and with perseverance. Responses are highly insightful, accurate, clear, concise, convincing, logically structured, with sufficient detail, precise use of appropriate terminology and with appropriate attention to purpose and audience. Responses are creative, make very effective use of well-selected examples, demonstrate awareness of alternative points of view and provide clear evidence of intercultural understanding.

6 The student demonstrates very good content knowledge and understanding, conceptual and contextual awareness and critical, reflective thinking. Competent research, investigation and technical skills are evident, as is the ability to analyse, evaluate and synthesize evidence, knowledge and concepts. In collaborative exercises, the student works well with others, ethically and responsibly, and with perseverance. Responses are mainly accurate, clear, concise, convincing, logically structured, with sufficient detail, using consistent terminology and with appropriate attention to purpose and audience. Responses show creativity, make effective use of examples, demonstrate awareness of alternative points of view and provide evidence of intercultural understanding.

5 The student demonstrates sound content knowledge and understanding, good conceptual and contextual awareness and evidence of critical, reflective thinking. Research, investigation and technical skills are evident and sometimes well developed. Analytical ability is evident, although responses may at times be more descriptive than evaluative. In collaborative investigations, the student generally works well with others, ethically and responsibly, and with perseverance. Responses are generally accurate, clear, logically structured and coherent, with mainly relevant material, using suitable terminology, and are sometimes well developed. Responses show reasonable creativity, use of examples, awareness of audience and evidence of intercultural understanding.

4 The student demonstrates, with some gaps, secure content knowledge and understanding, some conceptual and contextual awareness and some evidence of critical thinking. Research, investigation and technical skills are evident, but not thoroughly developed. Analysis is generally valid, but more descriptive than evaluative. The student solves basic or routine problems, but with limited ability to deal with new or difficult situations. In collaborative exercises, the student works within a team and generally approaches investigations ethically and responsibly, but requires supervision. Responses are mostly accurate and clear with little irrelevant material. There is some ability to logically structure responses with adequate coherence and use of appropriate terminology. Responses sometimes show creativity, and include some awareness of audience and evidence of intercultural understanding.

3 The student demonstrates basic knowledge and understanding of the content, with limited evidence of conceptual and contextual awareness. Research and/or investigation is evident, but remains undeveloped. There is some ability to comprehend and solve problems. Collaborative investigations are approached ethically and responsibly, but require close supervision. Responses are only sometimes valid and appropriately detailed. There is some expression of ideas and organization of work and basic use of appropriate terminology, but arguments are rarely convincing. Responses lack clarity and some material is repeated or irrelevant. There is limited creativity, awareness of context or audience and limited evidence of intercultural understanding.

2 The student demonstrates little knowledge or understanding of the content, with weak comprehension of concepts and context and little evidence of application. Evidence of research and/or investigation is only superficial. There is little ability to comprehend and solve problems. Responses are rarely accurate or valid. There is some attempt to express ideas, use terminology appropriate to the subject and organize work, but the response is rarely convincing. There is very little creativity, awareness of context or audience and little evidence of intercultural understanding.

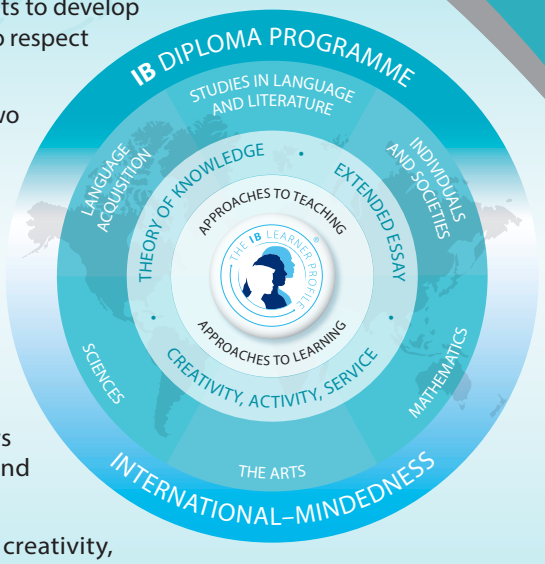
1 The student demonstrates very rudimentary knowledge or understanding of the content, with very weak comprehension of concepts and context. Ability to comprehend and solve problems or to express ideas is not evident. Responses are rarely accurate or valid. Organization is lacking to the point that responses are confusing. Responses demonstrate very little to no appreciation of context or audience, inappropriate or inadequate use of terminology, and little to no intercultural understanding.

International Baccalaureate Diploma Programme Subject Brief

Language A: language and literature

First assessments for SL and HL—2021

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.

This IB DP subject brief has three key components:
I. Course description and aims II. Curriculum model overview III. Assessment model

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 meanings
- 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**

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.

Assessment at a glance

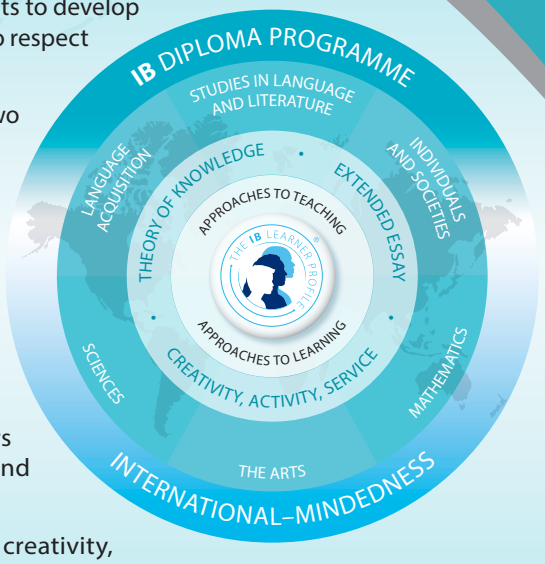
Type of assessment	Format of assessment	Time (hours)		Weighting of final grade (%)	
		SL	HL	SL	HL
External					
Paper 1: Guided textual analysis	Guided analysis of unseen non-literary passage/passages from different text types.	1.25	2.25	35	35
Paper 2: Comparative essay	Comparative essay based on two 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

International Baccalaureate Diploma Programme Subject Brief

Language A: literature

First assessments for SL and HL—2021

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.

This IB DP subject brief has three key components:
I. Course description and aims II. Curriculum model overview III. Assessment model

I. Course description and aims

The language A: literature aims at exploring the various manifestations of literature as a particularly powerful mode of writing across cultures and throughout history. The course aims at developing an understanding of factors that contribute to the production and reception of literature—the creativity of writers and readers, the nature of their interaction with their respective contexts and with literary tradition, the ways in which language can give rise to meaning and/or effect, and the performative and transformative potential of literary creation and response. Through close analysis of a range of literary texts in a number of literary forms and from different times and places, 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 meanings
- 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**

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.

Assessment at a glance

Type of assessment	Format of assessment	Time (hours)		Weighting of final grade (%)	
		SL	HL	SL	HL
External					
Paper 1: Guided literary analysis	Guided analysis of unseen 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 work studied.				20
Internal					
Individual oral	Prepared oral response on the way that one work originally written in the language studied and one work studied in translation have approached a common global issue.			30	20

International Baccalaureate Diploma Programme Subject Brief

Language B

First assessment 2020

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.

This IB DP subject brief has four key components:

I. Course description and aims II. Curriculum model overview III. Assessment model IV. Content outline

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.

Language B is a language acquisition course designed for students with some previous experience of the target language. Students further develop their 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.

Both language B SL and HL students learn to communicate in the target language in familiar and unfamiliar contexts. The distinction between language B SL and HL can be seen in the level of competency the student is expected to develop in receptive, productive and interactive skills.

At HL the study of two literary works originally written in the target language is required and students are expected to extend the range and complexity of the language they use and understand in order to communicate. Students continue to develop their knowledge of vocabulary and grammar, as well as their conceptual understanding of how language works, in order to construct, analyse and evaluate arguments on a variety of topics relating to course content and the target language culture(s).

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.

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- 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 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 interpersonal 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 B SL and HL assessment outline		Weighting
External 75%	**Paper 1** (productive skills) One writing task 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%**

The assessment outlines for language B SL and HL are identical; it is the nature of the assessment that differs and this is what distinguishes SL assessments from those of HL.

For language B HL paper 1, the tasks set will require more complex language and structures and demand higher-order thinking skills. Additionally for HL, a higher word range has been provided in order to accommodate the more complex responses required.

For the individual oral internal assessment, the stimulus at language B SL is a visual image that is clearly relevant to one (or more) of the themes of the course. The stimulus at language B HL is an excerpt from one of the two literary works studied.

IV. Content outline

Theme	Guiding principle	Optional recommended topics		Possible questions
Identities	Explore the nature of the self and what it is to be human.	• Lifestyles • Health and well-being • Beliefs and values	• Subcultures • Language and identity	• What constitutes an identity? • How do language and culture contribute to form our identity?
Experiences	Explore and tell the stories of the events, experiences and journeys that shape our lives.	• Leisure activities • Holidays and travel • Life stories	• Rites of passage • Customs and traditions • Migration	• How does our past shape our present and our future? • How and why do different cultures mark important moments in life?
Human ingenuity	Explore the ways in which human creativity and innovation affect our world.	• Entertainment • Artistic expressions • Communication and media	• Technology • Scientific innovation	• What can we learn about a culture through its artistic expression? • How do the media change the way we relate to each other?
Social organization	Explore the ways in which groups of people organize themselves, or are organized, through common systems or interests.	• Social relationships • Community • Social engagement	• Education • The working world • Law and order	• What is the individual's role in the community? • What role do rules and regulations play in the formation of a society?
Sharing the planet	Explore the challenges and opportunities faced by individuals and communities in the modern world.	• The environment • Human rights • Peace and conflict • Equality	• Globalization • Ethics • Urban and rural environment	• What environmental and social issues present challenges to the world, and how can these challenges be overcome? • What challenges and benefits does globalization bring?

About the IB: For 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: **www.ibo.org/en/programmes/diploma-programme/**.
Complete subject guides can be accessed through the programme resource centre or purchased through the IB store: **store.ibo.org**.
For more on how the DP prepares students for success at university, visit: **www.ibo.org/en/university-admission**.

International Baccalaureate Diploma Programme Subject Brief

Individuals and societies:
Business management—Higher level

First assessments 2016 – Last assessments 2022

The IB Diploma Programme (DP) is a rigorous, academically challenging and balanced programme of education designed to prepare students aged 16 to 19 for success at university and life beyond. The DP aims to encourage students to be knowledgeable, inquiring, caring and compassionate, and to develop intercultural understanding, open-mindedness and the attitudes necessary to respect and evaluate a range of viewpoints. Approaches to teaching and learning (ATL) within the DP are deliberate strategies, skills and attitudes that permeate the teaching and learning environment. In the DP students develop skills from five ATL categories: thinking, research, social, self-management and communication.

To ensure both breadth and depth of knowledge and understanding, students must choose at least one subject from five groups: 1) their best language, 2) additional language(s), 3) social sciences, 4) experimental sciences, and 5) mathematics. Students may choose either an arts subject from group 6, or a second subject from groups 1 to 5. At least three and not more than four subjects are taken at higher level (240 recommended teaching hours), while the remaining are taken at standard level (150 recommended teaching hours). In addition, three core elements—the extended essay, theory of knowledge and creativity, action, service—are compulsory and central to the philosophy of the programme.

These IB DP subject briefs illustrate four key course components.
I. Course description and aims
II. Curriculum model overview
III. Assessment model
IV. Sample questions

I. Course description and aims

The business management course is designed to develop students' knowledge and understanding of business management theories, as well as their ability to apply a range of tools and techniques. Students learn to analyse, discuss and evaluate business activities at local, national and international levels. The course covers a range of organizations from all sectors, as well as the sociocultural and economic contexts in which those organizations operate.

The course covers the key characteristics of business organization and environment, and the business functions of human resource management, finance and accounts, marketing and operations management. Links between the topics are central to the course. Through the exploration of six underpinning concepts (change, culture, ethics, globalization, innovation and strategy), the course allows students to develop a holistic understanding of today's complex and dynamic business environment. The conceptual learning is firmly anchored in business management theories, tools and techniques and placed in the context of real world examples and case studies.

The course encourages the appreciation of ethical concerns at both a local and global level. It aims to develop relevant and transferable skills, including the ability to: think critically; make ethically sound and well-informed decisions; appreciate the pace, nature and significance of change; think strategically; and undertake long-term planning, analysis and evaluation. The course also develops subject-specific skills, such as financial analysis.

The aims of the business management course at HL and SL are to:

1. encourage a holistic view of the world of business
2. empower students to think critically and strategically about individual and organizational behaviour
3. promote the importance of exploring business issues from different cultural perspectives
4. enable the student to appreciate the nature and significance of change in a local, regional and global context
5. promote awareness of the importance of environmental, social and ethical factors in the actions of individuals and organizations
6. develop an understanding of the importance of innovation in a business environment.

II. Curriculum model overview

Component	Recommended teaching hours
Unit 1: Business organization and environment 1.1 Introduction to business management 1.2 Types of organizations 1.3 Organizational objectives 1.4 Stakeholders 1.5 External environment 1.6 Growth and evolution 1.7 Organizational planning tools	**50**

Unit 2: Human resource management 2.1 Functions and evolution of human resource management 2.2 Organizational structure 2.3 Leadership and management 2.4 Motivation 2.5 Organizational (corporate) culture 2.6 Industrial/employee relations	**30**
Unit 3: Finance and accounts 3.1 Sources of finance 3.2 Costs and revenues 3.3 Break-even analysis 3.4 Final accounts 3.5 Profitability and liquidity ratio analysis 3.6 Efficiency ratio analysis 3.7 Cash flow 3.8 Investment appraisal 3.9 Budgets	**50**
Unit 4: Marketing 4.1 The role of marketing 4.2 Marketing planning (including introduction to the four Ps) 4.3 Sales forecasting 4.4 Market research 4.5 The four Ps (product, price, promotion, place) 4.6 The extended marketing mix of seven Ps 4.7 International marketing 4.8 E-commerce	**50**
Unit 5: Operations management 5.1 The role of operations management 5.2 Production methods 5.3 Lean production and quality management 5.4 Location 5.5 Production planning 5.6 Research and development 5.7 Crisis management and contingency planning	**30**
Internal assessment	**30**

III. Assessment model

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

1. Demonstrate knowledge and understanding of:
   - the business management tools, techniques and theories specified in the syllabus content
   - the six concepts that underpin the subject
   - real-world business problems, issues and decisions
   - the HL extension topics.
2. Demonstrate application and analysis of:
   - knowledge and skills to a variety of real-world and fictional business situations
   - business decisions by explaining the issue(s) at stake, selecting and interpreting data, and applying appropriate tools, techniques, theories and concepts
   - the HL extension topics.
3. Demonstrate synthesis and evaluation of:
   - business strategies and practices, showing evidence of critical thinking
   - business decisions, formulating recommendations
   - the HL extension topics.
4. Demonstrate a variety of appropriate skills to:
   - produce well-structured written material using business terminology
   - select and use quantitative and qualitative business tools, techniques and methods
   - select and use business material, from a range of primary and secondary sources.

Assessment at a glance

Type of assessment	Format of assessment	Time (hours)	Weighting of final grade (%)
External		4.5	75
Paper 1	Structured and extended response questions	2.25	35
Paper 2	Structured and extended response questions	2.25	40
Internal		30	25
Research project	Students research and report on an issue facing an organization or a decision to be made by an organization (or several organizations). Maximum 2,000 words.	30	25

IV. Sample questions

- Analyse the appropriateness of a cost-plus pricing strategy for B-Pharma's drugs.
- Evaluate the effectiveness of the democratic leadership style of the partners at Hands.
- With reference to one or two organization(s) that you have studied, discuss how marketing strategies may differ in two cultures that you are familiar with.

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International Baccalaureate Diploma Programme Subject Brief

Individuals and societies:

Business management— Standard level

First assessments 2016 – Last assessments 2022

The IB Diploma Programme (DP) is a rigorous, academically challenging and balanced programme of education designed to prepare students aged 16 to 19 for success at university and life beyond. The DP aims to encourage students to be knowledgeable, inquiring, caring and compassionate, and to develop intercultural understanding, open-mindedness and the attitudes necessary to respect and evaluate a range of viewpoints. Approaches to teaching and learning (ATL) within the DP are deliberate strategies, skills and attitudes that permeate the teaching and learning environment. In the DP students develop skills from five ATL categories: thinking, research, social, self-management and communication.

To ensure both breadth and depth of knowledge and understanding, students must choose at least one subject from five groups: 1) their best language, 2) additional language(s), 3) social sciences, 4) experimental sciences, and 5) mathematics. Students may choose either an arts subject from group 6, or a second subject from groups 1 to 5. At least three and not more than four subjects are taken at higher level (240 recommended teaching hours), while the remaining are taken at standard level (150 recommended teaching hours). In addition, three core elements—the extended essay, theory of knowledge and creativity, action, service—are compulsory and central to the philosophy of the programme.

These IB DP subject briefs illustrate four key course components.

I. Course description and aims
II. Curriculum model overview
III. Assessment model
IV. Sample questions

I. Course description and aims

The business management course is designed to develop students' knowledge and understanding of business management theories, as well as their ability to apply a range of tools and techniques. Students learn to analyse, discuss and evaluate business activities at local, national and international levels. The course covers a range of organizations from all sectors, as well as the sociocultural and economic contexts in which those organizations operate.

The course covers the key characteristics of business organization and environment, and the business functions of human resource management, finance and accounts, marketing and operations management. Through the exploration of six underpinning concepts (change, culture, ethics, globalization, innovation and strategy), the course allows students to develop a holistic understanding of today's complex and dynamic business environment. The conceptual learning is firmly anchored in business management theories, tools and techniques and placed in the context of real world examples and case studies.

The course encourages the appreciation of ethical concerns, at both a local and global level. It aims to develop relevant and transferable skills, including the ability to: think critically; make ethically sound and well-informed decisions; appreciate the pace, nature and significance of change; think strategically; and undertake long term planning, analysis and evaluation. The course also develops subject-specific skills, such as financial analysis.

The aims of the business management course at HL and SL are to:

1. encourage a holistic view of the world of business
2. empower students to think critically and strategically about individual and organizational behaviour
3. promote the importance of exploring business issues from different cultural perspectives
4. enable the student to appreciate the nature and significance of change in a local, regional and global context
5. promote awareness of the importance of environmental, social and ethical factors in the actions of individuals and organizations
6. develop an understanding of the importance of innovation in a business environment.

II. Curriculum model overview

Component	Recommended teaching hours
Unit 1: Business organization and environment 1.1 Introduction to business management 1.2 Types of organizations 1.3 Organizational objectives 1.4 Stakeholders 1.5 External environment 1.6 Growth and evolution	**40**
Unit 2: Human resource management 2.1 Functions and evolution of human resource management 2.2 Organizational structure 2.3 Leadership and management 2.4 Motivation	**15**

Unit 3: Finance and accounts 3.1 Sources of finance 3.2 Costs and revenues 3.3 Break-even analysis 3.4 Final accounts (some HL only) 3.5 Profitability and liquidity ratio analysis 3.6 Cash flow 3.7 Investment appraisal (some HL only)	**35**
Unit 4: Marketing 4.1 The role of marketing 4.2 Marketing planning (including introduction to the four Ps) 4.3 Market research 4.4 The four Ps (product, price, promotion, place) 4.5 E-commerce	**35**
Unit 5: Operations management 5.1 The role of operations management 5.2 Production methods 5.3 Location	**10**
Internal assessment	**15**

III. Assessment model

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

1. Demonstrate knowledge and understanding of:
   - the business management tools, techniques and theories specified in the syllabus content
   - the six concepts that underpin the subject
   - real-world business problems, issues and decisions
2. Demonstrate application and analysis of:
   - knowledge and skills to a variety of real-world and fictional business situations
   - business decisions by explaining the issue(s) at stake, selecting and interpreting data, and applying appropriate tools, techniques, theories and concepts
3. Demonstrate synthesis and evaluation of:
   - business strategies and practices, showing evidence of critical thinking
   - business decisions, formulating recommendations
4. Demonstrate a variety of appropriate skills to:
   - produce well-structured written material using business terminology
   - select and use quantitative and qualitative business tools, techniques and methods
   - select and use business material, from a range of primary and secondary sources.

Assessment at a glance

Type of assessment	Format of assessment	Time (hours)	Weighting of final grade (%)
External		3	75
Paper 1	Structured questions	1.25	35
Paper 2	Structured and extended response questions	1.75	40
Internal		15	25
Written commentary	Students produce a written commentary based on three to five supporting documents about a real issue or problem facing a particular organization. Maximum 1,500 words.	15	25

IV. Sample questions

- Apply the Boston Consulting Group (BCG) matrix to B-Pharma's product portfolio.
- Examine possible strategies for Dan Electro to prevent cash flow difficulties.
- With reference to one organization that you have studied, examine what changes globalization brings about in the management of human resources.

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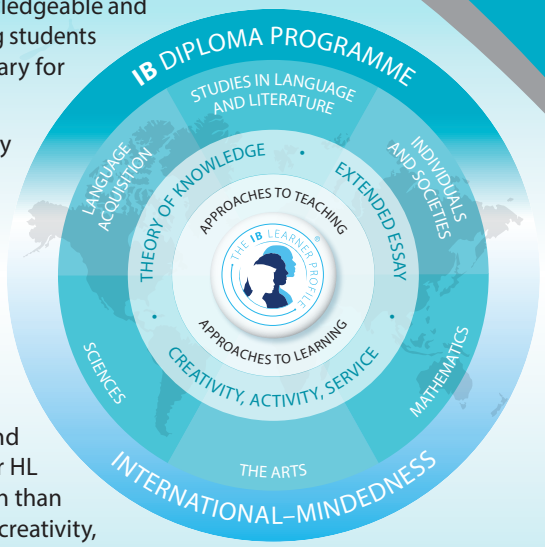
International Baccalaureate Diploma Programme Subject Brief

Individuals and societies: Economics—higher level

First assessments 2022—last assessments 2029

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.

These DP subject briefs illustrate four key course components.

I. Course description and aims
II. Curriculum model overview
III. Assessment model
IV. Sample questions

I. Course description and aims

Economics is an exciting, dynamic subject that allows students to develop an understanding of the complexities and interdependence of economic activities in a rapidly changing world. At the heart of economic theory is the problem of scarcity. Owing to scarcity, choices have to be made. The economics course, at both SL and HL, uses economic theories, models and key concepts to examine the ways in which these choices are made: at the level of producers and consumers in individual markets (microeconomics); at the level of the government and the national economy (macroeconomics); and at an international level, where countries are becoming increasingly interdependent (the global economy). The DP economics course allows students to explore these models, theories and key concepts, and apply them, using empirical data, through the examination of six real-world issues. Through their own inquiry, students will be able to appreciate both the values and limitations of economic models in explaining real-world economic behaviour and outcomes. By focusing on the six real-world issues through the nine key concepts (scarcity, choice, efficiency, equity, economic well-being, sustainability, change, interdependence and intervention), students of the economics course will develop the knowledge, skills, values and attitudes that will encourage them to act responsibly as global citizens.

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

- develop a critical understanding of a range of economic theories, models, ideas and tools in the areas of microeconomics, macroeconomics and the global economy
- apply economic theories, models, ideas and tools, and analyse economic data to understand and engage with real-world economic issues and problems facing individuals and societies
- develop a conceptual understanding of individuals' and societies' economic choices, interactions, challenges and consequences of economic decision-making.

II. Curriculum model overview

Component	Recommended teaching hours
Unit 1: Introduction to economics 1.1 What is economics? 1.2 How do economists approach the world?	**10**
Unit 2: Microeconomics 2.1 Demand 2.2 Supply 2.3 Competitive market equilibrium 2.4 Critique of the maximizing behaviour of consumers and producers 2.5 Elasticity of demand 2.6 Elasticity of supply 2.7 Role of government in microeconomics 2.8 Market failure—externalities and common pool or common access resources 2.9 Market failure—public goods 2.10 Market failure—asymmetric information 2.11 Market failure—market power 2.12 The market's inability to achieve equity	**70**
Unit 3: Macroeconomics 3.1 Measuring economic activity and illustrating its variations 3.2 Variations in economic activity—aggregate demand and aggregate supply 3.3 Macroeconomic objectives 3.4 Economics of inequality and poverty 3.5 Demand management (demand-side policies)—monetary policy 3.6 Demand management—fiscal policy 3.7 Supply-side policies	**75**

Unit 4: The global economy 4.1 Benefits of international trade 4.2 Types of trade protection 4.3 Arguments for and against trade control/ protection 4.4 Economic integration 4.5 Exchange rates 4.6 Balance of payments 4.7 Sustainable development 4.8 Measuring development 4.9 Barriers to economic growth and/or economic development 4.10 Economic growth and/or economic development strategies	**65**
Internal assessment Portfolio of three commentaries	**20**

III. Assessment model

There are four assessment objectives for the DP economics course. Having followed the course at HL, students will be expected to meet the following objectives.

Assessment objective 1: Knowledge and understanding
- Demonstrate knowledge and understanding of specified content
- Demonstrate knowledge and understanding of the common SL/HL syllabus
- Demonstrate knowledge and understanding of current economic issues and data
- Demonstrate knowledge and understanding of the HL extension topics

Assessment objective 2: Application and analysis
- Apply economic concepts and theories to real-world situations
- Identify and interpret economic data
- Analyse how economic information is used effectively in particular contexts
- In the internal assessment task: Explain the link between key economic concepts and economic commentaries
- Demonstrate application and analysis of the HL extension topics

Assessment objective 3: Synthesis and evaluation
- Examine economic concepts and theories
- Use economic concepts and examples to construct and present an argument
- Discuss and evaluate economic information and theories
- Demonstrate economic synthesis and evaluation of the HL extension topics
- Select and use economic data using economic theory to make policy recommendations

Assessment objective 4: Use and application of appropriate skills
- Produce well-structured written material, using appropriate economic theory, concepts and terminology
- Produce and use diagrams to help explain economic theory, concepts and real-world issues
- Select, interpret and analyse appropriate extracts from the news media
- Interpret appropriate data sets
- Use quantitative techniques to identify, explain and analyse economic relationships

Type of assessment	Format of assessment	Time	Weighting of final grade (%)
External		4 hours 45 mins	80
Paper 1	Extended response paper based on all units of the syllabus	1 hour 15 mins	20
Paper 2	Data response paper based on all units of the syllabus	1 hour 45 mins	30
Paper 3	Policy paper based on all units of the syllabus	1 hour 45 mins	30
Internal			
Portfolio	Three commentaries based on different units of the syllabus (except the introductory unit) and from published extracts from the news media, analysed using different key concepts	20 hours	20

IV. Sample questions

Paper 1
- Explain two tools open to a central bank to conduct expansionary monetary policy.
- Using real-world examples, evaluate the effectiveness of monetary policy to achieve low unemployment.

Paper 2
- Using an exchange rate diagram, explain how the increase in the interest rate by the Nigerian central bank might prevent the continued fall in the value of the naira.

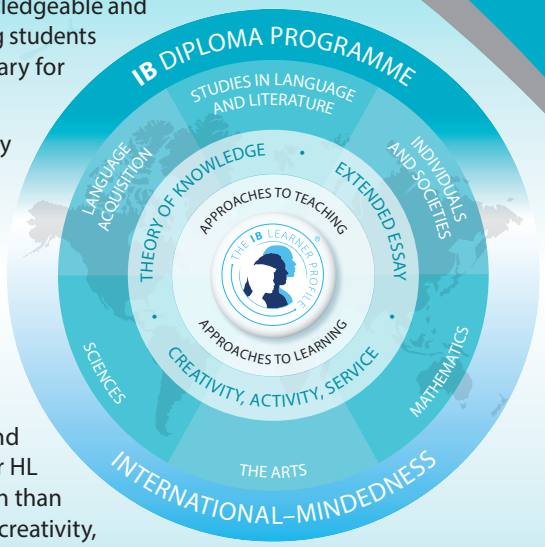
Paper 3
- Using the data provided, and your knowledge of economics, recommend a policy that could be introduced by the government of Country X in response to the expected fall in the world price of coffee.

International Baccalaureate Diploma Programme Subject Brief

Individuals and societies: Economics—standard level

First assessments 2022—last assessments 2029

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.

These DP subject briefs illustrate four key course components.

I. Course description and aims
II. Curriculum model overview
III. Assessment model
IV. Sample questions

I. Course description and aims

Economics is an exciting, dynamic subject that allows students to develop an understanding of the complexities and interdependence of economic activities in a rapidly changing world. At the heart of economic theory is the problem of scarcity. Owing to scarcity, choices have to be made. The economics course, at both SL and HL, uses economic theories, models and key concepts to examine the ways in which these choices are made: at the level of producers and consumers in individual markets (microeconomics); at the level of the government and the national economy (macroeconomics); and at an international level, where countries are becoming increasingly interdependent (the global economy). The DP economics course allows students to explore these models, theories and key concepts, and apply them, using empirical data, through the examination of six real-world issues. Through their own inquiry, students will be able to appreciate both the values and limitations of economic models in explaining real-world economic behaviour and outcomes. By focusing on the six real-world issues through the nine key concepts (scarcity, choice, efficiency, equity, economic well-being, sustainability, change, interdependence and intervention), students of the economics course will develop the knowledge, skills, values and attitudes that will encourage them to act responsibly as global citizens.

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

- develop a critical understanding of a range of economic theories, models, ideas and tools in the areas of microeconomics, macroeconomics and the global economy
- apply economic theories, models, ideas and tools, and analyse economic data to understand and engage with real-world economic issues and problems facing individuals and societies
- develop a conceptual understanding of individuals' and societies' economic choices, interactions, challenges and consequences of economic decision-making.

II. Curriculum model overview

Component	Recommended teaching hours
Unit 1: Introduction to economics 1.1 What is economics? 1.2 How do economists approach the world?	**10**
Unit 2: Microeconomics 2.1 Demand 2.2 Supply 2.3 Competitive market equilibrium 2.4 Critique of the maximizing behaviour of consumers and producers 2.5 Elasticity of demand 2.6 Elasticity of supply 2.7 Role of government in microeconomics 2.8 Market failure—externalities and common pool or common access resources 2.9 Market failure—public goods	**35**
Unit 3: Macroeconomics 3.1 Measuring economic activity and illustrating its variations 3.2 Variations in economic activity—aggregate demand and aggregate supply 3.3 Macroeconomic objectives 3.4 Economics of inequality and poverty 3.5 Demand management (demand-side policies)—monetary policy 3.6 Demand management—fiscal policy 3.7 Supply-side policies	**40**

Unit 4: The global economy 4.1 Benefits of international trade 4.2 Types of trade protection 4.3 Arguments for and against trade control/ protection 4.4 Economic integration 4.5 Exchange rates 4.6 Balance of payments 4.7 Sustainable development 4.8 Measuring development 4.9 Barriers to economic growth and/or economic development 4.10 Economic growth and/or economic development strategies	**45**
Internal assessment Portfolio of three commentaries	**20**

III. Assessment model

There are four assessment objectives for the DP economics course. Having followed the course at SL, students will be expected to meet the following objectives.

Assessment objective 1: Knowledge and understanding
- Demonstrate knowledge and understanding of specified content
- Demonstrate knowledge and understanding of the common SL/HL syllabus
- Demonstrate knowledge and understanding of current economic issues and data

Assessment objective 2: Application and analysis
- Apply economic concepts and theories to real-world situations
- Identify and interpret economic data
- Analyse how economic information is used effectively in particular contexts
- In the internal assessment task: Explain the link between key economic concepts and economic commentaries

Assessment objective 3: Synthesis and evaluation
- Examine economic concepts and theories
- Use economic concepts and examples to construct and present an argument
- Discuss and evaluate economic information and theories

Assessment objective 4: Use and application of appropriate skills
- Produce well-structured written material, using appropriate economic theory, concepts and terminology
- Produce and use diagrams to help explain economic theory, concepts and real-world issues
- Select, interpret and analyse appropriate extracts from the news media
- Interpret appropriate data sets
- Use quantitative techniques to identify, explain and analyse economic relationships

Type of assessment	Format of assessment	Time	Weighting of final grade (%)
External		3 hours	70
Paper 1	Extended response paper based on all units of the syllabus	1 hour 15 mins	30
Paper 2	Data response paper based on all units of the syllabus	1 hour 45 mins	40
Internal			
Portfolio	Three commentaries based on different units of the syllabus (except the introductory unit) and from published extracts from the news media, analysed using different key concepts	20 hours	30

IV. Sample questions

Paper 1
- Explain two reasons why a government might set a price ceiling (maximum price) on a good.
- Using real-world examples, discuss the consequences of a price ceiling on stakeholders.

Paper 2
- Using a poverty cycle diagram, explain how the net increase in foreign direct investment (FDI) in Mexico between 2010 and 2015 might lead to an improvement in economic development.

International Baccalaureate Diploma Programme Subject Brief

Individuals and societies: Geography

First assessments 2019

The IB Diploma Programme (DP) is a rigorous, academically challenging and balanced programme of education designed to prepare students aged 16 to 19 for success at university and life beyond. The DP aims to encourage students to be knowledgeable, inquiring, caring and compassionate, and to develop intercultural understanding, open-mindedness and the attitudes necessary to respect and evaluate a range of viewpoints. Approaches to teaching and learning (ATL) are deliberate strategies, skills and attitudes that permeate the teaching and learning environment. In the DP students develop skills from five ATL categories: thinking, research, social, self-management and communication.

To ensure both breadth and depth of knowledge and understanding, students must choose at least one subject from five groups: 1) their best language, 2) additional language(s), 3) social sciences, 4) sciences, and 5) mathematics. Students may choose either an arts subject from group 6, or a second subject from groups 1 to 5. At least three and not more than four subjects are taken at higher level (240 recommended teaching hours), while the remaining are taken at standard level (150 recommended teaching hours). 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.

These IB DP subject briefs illustrate the following key course components.

I. Course description and aims
II. Curriculum model overview
III. Assessment model
IV. Sample questions

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 strategies 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 methodologies. 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 demonstrate 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 interactions** • 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

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**
   - between areas of film focus and film elements employed by
   - 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?

About the IB: For nearly 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, and a complete list of DP subject briefs, visit: ***http://www.ibo.org/diploma/****.*

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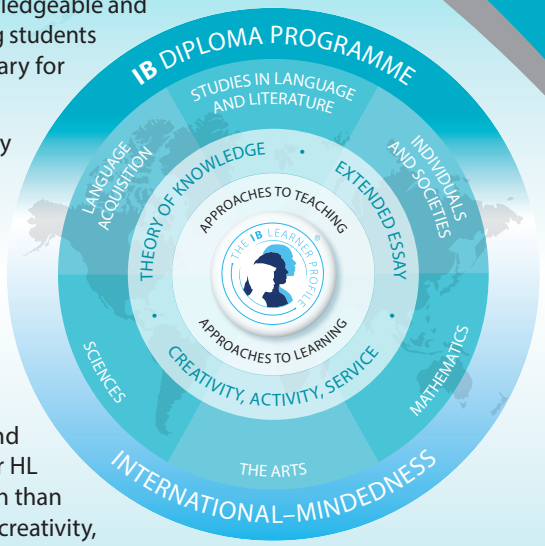
For more on how the DP prepares students for success at university, visit: www.ibo.org/recognition or email: ***recognition@ibo.org****.*

International Baccalaureate Diploma Programme Subject Brief

Individuals and societies: History—higher level

First assessments 2017—last assessments 2025

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.

These DP subject briefs illustrate four key course components.

I. Course description and aims
II. Curriculum model overview
III. Assessment model
IV. Sample questions

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 think-ing, 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, sig-nificance 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
HL options: Depth studies ***One of the following:*** 1. History of Africa and the Middle East 2. History of the Americas 3. History of Asia and Oceania 4. History of Europe	90
Internal assessment Historical investigation	20

III. Assessment model

There are four assessment objectives for the DP history course. Having followed the course at higher level (HL), 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
- Structure and develop focused essays that respond effectively to the demands of a question.
- Reflect on the methods used by, and challenges facing, the historian.
- Formulate an appropriate, focused question to guide a historical inquiry.
- Demonstrate evidence of research skills, organization, reference and selection of appropriate sources.

Assessment at a glance

Type of assessment	Format of assessment	Time (hours)	Weighting of final grade (%)
External		5	80
Paper 1	Source-based paper based on the five prescribed subjects	1	20
Paper 2	Essay paper based on the 12 world history topics	1.5	25
Paper 3	Essay paper based on one of the four regional options	2.5	35
Internal			
Historical investigation	A historical investigation into a topic of the student's choice.	20	20

IV. Sample questions

Paper 1

When presented with five sources related to the enforcements of the provisions of the treaties, disarmament and London Naval Conference (1930), students will:
- explain the significance of the Conference
- compare and contrast the views of the Conference presented in different sources
- assess the value and limitations of sources
- use the sources and their own knowledge to discuss the extent to which they agree with the view that the London Naval Conference was unsuccessful.

International Baccalaureate Diploma Programme Subject Brief

Individuals and societies: History—standard level

First assessments 2017—last assessments 2025

The IB Diploma Programme (DP) is a rigorous, academically challenging and balanced programme of education designed to prepare students aged 16 to 19 for success at university and life beyond. The DP aims to encourage students to be knowledgeable, inquiring, caring and compassionate, and to develop intercultural understanding, open-mindedness and the attitudes necessary to respect and evaluate a range of viewpoints. Approaches to teaching and learning (ATL) are deliberate strategies, skills and attitudes that permeate the teaching and learning environment. In the DP, students develop skills from five ATL categories: thinking, research, social, self-management and communication.

To ensure both breadth and depth of knowledge and understanding, students must choose six courses from six distinct groups: 1) studies in language and literature; 2) language acquisition; 3) individuals and societies; 4) sciences; 5) mathematics; 6) the arts. Students may choose to replace the arts course with a second course from one of the other five groups. At least three, and not more than four, subjects are taken at higher level (240 recommended teaching hours), while the remaining are taken at standard level (150 recommended teaching hours). 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.

These DP subject briefs illustrate four key course components.
I. Course description and aims
II. Curriculum model overview
III. Assessment model
IV. Sample questions

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 variety 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 interpretations of history. In this way, the course involves a challenging and demanding critical exploration of the past. Teachers explicitly teach thinking and research 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 contemporary 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 medieval 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. Evolution 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

- Structure and develop focused essays that respond effectively to the demands of a question.
- Reflect on the methods used by, and challenges facing, the historian.
- Formulate an appropriate, focused question to guide a historical inquiry.
- Demonstrate evidence of research skills, organization, reference and selection of appropriate 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.

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International Baccalaureate Diploma Programme Subject Brief

Sciences:

Biology—Higher level

First assessments 2016 – Last assessments 2022

The IB Diploma Programme (DP) is a rigorous, academically challenging and balanced programme of education designed to prepare students aged 16 to 19 for success at university and life beyond. The DP aims to encourage students to be knowledgeable, inquiring, caring and compassionate, and to develop intercultural understanding, open-mindedness and the attitudes necessary to respect and evaluate a range of viewpoints. Approaches to teaching and learning (ATL) within the DP are deliberate strategies, skills and attitudes that permeate the teaching and learning environment. In the DP students develop skills from five ATL categories: thinking, research, social, self-management and communication.

To ensure both breadth and depth of knowledge and understanding, students must choose at least one subject from five groups: 1) their best language, 2) additional language(s), 3) social sciences, 4) experimental sciences, and 5) mathematics. Students may choose either an arts subject from group 6, or a second subject from groups 1 to 5. At least three and not more than four subjects are taken at higher level (240 recommended teaching hours), while the remaining are taken at standard level (150 recommended teaching hours). In addition, three core elements—the extended essay, theory of knowledge and creativity, action, service—are compulsory and central to the philosophy of the programme.

These IB DP subject briefs illustrate four key course components.

I. Course description and aims
II. Curriculum model overview
III. Assessment model
IV. Sample questions

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.

II. Curriculum model overview

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
Additional higher level	**60**
7. Nucleic acids	9
8. Metabolism, cell respiration and photosynthesis	14
9. Plant biology	13
10. Genetics and evolution	8
11. Animal physiology	16

Option (Choice of one out of four)	**25**
A. Neurobiology and behaviour	25
B. Biotechnology and bioinformatics	25
C. Ecology and conservation	25
D. Human physiology	25
Practical scheme of work	**60**
Prescribed and other practical activities	40
Individual 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 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. 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		4.5	80
Paper 1	40 multiple-choice questions	1	20
Paper 2	Data-based, short answer and extended response questions	2.25	36
Paper 3	Data-based, short answer and extended response questions	1.25	24
Internal		10	20
Individual investigation	Investigation and write-up of 6 to 12 pages	10	20

IV. Sample questions

- Membrane proteins of mice cells were marked with green and membrane proteins of human cells were marked with red. The cells were fused together. What would be seen after two hours? (Paper 1)

- The species is the basis for naming and classifying organism.
  - o Explain how new species can emerge by
    - directional selection
    - disruptive selection
    - polyploidy.
  - o Outline the advantages to scientists of the binomial system for naming species.
  - o Describe the use of dichotomous keys for the identification of specimens. (Paper 2)

- Brain death is a clinical diagnosis based on the absence of neurological function, with a known irreversible cause of coma.
  - o Explain a named method to assess brain damage.
  - o Distinguish between a reflex arc and other responses by the nervous system.
  - o Describe the events that occur in the nervous system when something very hot is touched. (Paper 3)

International Baccalaureate Diploma Programme Subject Brief

Sciences:

Biology—Standard level

First assessments 2016 – Last assessments 2022

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To ensure both breadth and depth of knowledge and understanding, students must choose at least one subject from five groups: 1) their best language, 2) additional language(s), 3) social sciences, 4) experimental sciences, and 5) mathematics. Students may choose either an arts subject from group 6, or a second subject from groups 1 to 5. At least three and not more than four subjects are taken at higher level (240 recommended teaching hours), while the remaining are taken at standard level (150 recommended teaching hours). In addition, three core elements—the extended essay, theory of knowledge and creativity, action, service—are compulsory and central to the philosophy of the programme.

These IB DP subject briefs illustrate four key course components.

I. Course description and aims
II. Curriculum model overview
III. Assessment model
IV. Sample questions

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.

II. Curriculum model overview

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	**40**
Prescribed and other practical activities	20
Individual 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 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 fufill 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	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

Sciences:

Chemistry—Higher level

First assessments 2016 – Last assessments 2022

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These IB DP subject briefs illustrate four key course components.

I. Course description and aims
II. Curriculum model overview
III. Assessment model
IV. Sample questions

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 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.

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

Additional higher level (AHL)	**60**
12.Atomic structure	2
13.The periodic table—the transition metals	4
14.Chemical bonding and structure	7
15.Energetics/thermochemistry	7
16.Chemical kinetics	6
17.Equilibrium	4
18.Acids and bases	10
19.Redox processes	6
20.Organic chemistry	12
21.Measurement and analysis	2
Option (Choice of one out of four)	**25**
A. Materials	25
B. Biochemistry	25
C. Energy	25
D. Medicinal chemistry	25
Practical scheme of work	**60**
Prescribed and other practical activities	40
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

Studying this course, students should be 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		4.5	80
Paper 1	40 multiple-choice questions (Core and AHL)	1	20
Paper 2	Short answer and extended response questions (Core and AHL)	2.25	36
Paper 3	Data- and practical –based questions, plus short answer and extended response questions on the option	1.25	24
Internal		10	20
Individual investigation	Investigation and write-up of 6 to 12 pages	10	20

IV. Sample questions

- What is the sum of the coefficients when the equation for the combustion of ammonia is balanced using the smallest possible whole numbers?

  ___ NH_3 (g) + ___ O_2 (g) → ___ N_2 (g) + ___ H_2O (g)

  A. 6
  B. 12
  C. 14
  D. 15 (Paper 1)

- The two isomers of $[Pt(NH_3)_2Cl_2]$ are crystalline. One of the isomers is widely used in the treatment of cancer.
  i. Draw both isomers of the complex,
  ii. Explain the polarity of each isomer using a diagram of each isomer to support your answer,
  iii. State a suitable method (other than looking at dipole moments) to distinguish between the two isomers
  iv. Compare and contrast the bonding types formed by nitrogen in $[Pt(NH_3)_2Cl_2]$ (Paper 2)

About the IB: For over 40 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 able to contribute to creating a better, more peaceful world.

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International Baccalaureate Diploma Programme Subject Brief

Sciences:

Chemistry—Standard level

First assessments 2016 – Last assessments 2022

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To ensure both breadth and depth of knowledge and understanding, students must choose at least one subject from five groups: 1) their best language, 2) additional language(s), 3) social sciences, 4) experimental sciences, and 5) mathematics. Students may choose either an arts subject from group 6, or a second subject from groups 1 to 5. At least three and not more than four subjects are taken at higher level (240 recommended teaching hours), while the remaining are taken at standard level (150 recommended teaching hours). In addition, three core elements—the extended essay, theory of knowledge and creativity, action, service—are compulsory and central to the philosophy of the programme.

These IB DP subject briefs illustrate four key course components.

I. Course description and aims
II. Curriculum model overview
III. Assessment model
IV. Sample questions

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.

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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 characterize science and technology
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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 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 (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)

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International Baccalaureate Diploma Programme Subject Brief

Sciences:

Physics—Higher level

First assessments 2016 – Last assessments 2022

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These IB DP subject briefs illustrate four key course components.

I. Course description and aims
II. Curriculum model overview
III. Assessment model
IV. Sample questions

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
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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

Additional higher level	**60**
9. Wave phenomena	17
10.Fields	11
11.Electromagnetic induction	16
12.Quantum and nuclear physics	16
Option (Choice of one out of four)	**25**
A. Relativity	25
B. Engineering physics	25
C. Imaging	25
D. Astrophysics	25
Practical scheme of work	**60**
Prescribed and other practical activities	40
Individual investigation (internally assessed)	10
Group 4 project	10

The group 4 project

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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
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2. Apply:
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Type of assessment	Format of assessment	Time (hours)	Weighting of final grade (%)
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Internal		10	20
Individual investigation	Investigation and write-up of 6 to 12 pages	10	20

IV. Sample questions

- Why is wave-particle duality used in describing the properties of light?
  A. Light is both a wave and a particle
  B. Both wave and particle models can explain all the properties of light
  C. Different properties of light can be more clearly explained by using one of the wave or particle models
  D. Scientists feel more confident when using more than one model to explain a phenomenon (Paper 1)

- The tower is 120m high with an internal diameter of 3.5m. When most of the air has been removed, the pressure in the tower is 0.96 Pa.
  Determine the number of molecules of air in the tower when the temperature of the air is 300 K. (Paper 2)

- The streamlines above the airfoil are closer to each other than the streamlines below the airfoil. Suggest why this implies that the speed of the air above the airfoil is greater than the speed of air below the airfoil. (Paper 3)

International Baccalaureate Diploma Programme Subject Brief

Sciences:

Physics—Standard level

First assessments 2016 – Last assessments 2022

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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
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II. Curriculum model overview

Component	Recommended teaching hours
Core	**95**
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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**
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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

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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

The IB Diploma Programme (DP) is a rigorous, academically challenging and balanced programme of education designed to prepare students aged 16 to 19 for success at university and life beyond. The DP aims to encourage students to be knowledgeable, inquiring, caring and compassionate, and to develop intercultural understanding, open-mindedness and the attitudes necessary to respect and evaluate a range of viewpoints. Approaches to teaching and learning (ATL) are deliberate strategies, skills and attitudes that permeate the teaching and learning environment. In the DP students develop skills from five ATL categories: thinking, research, social, self-management and communication.

To ensure both breadth and depth of knowledge and understanding, students must choose at least one subject from five groups: 1) their best language, 2) additional language(s), 3) social sciences, 4) sciences, and 5) mathematics. Students may choose either an arts subject from group 6, or a second subject from groups 1 to 5. At least three and not more than four subjects are taken at higher level (240 recommended teaching hours), while the remaining are taken at standard level (150 recommended teaching hours). 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.

These IB DP subject briefs illustrate four the following key course components

I. Course description and aims
II. Curriculum model overview
III. Assessment model
IV. Sample questions

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 preparation 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 technology
- develop 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.

II. 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) • Further anatomy • The endocrine system • Fatigue • Friction and drag • Skill acquisition and analysis • Genetics and athletic performance • Exercise and immunity.		**50** 7 7 6 8 9 7 6
Options (Two of four) • Optimizing physiological performance • Psychology of sports • Physical activity and health • Nutrition for sports, exercise and health.	**30**	**50**
Practical work • Investigations • Group 4 project • Individual investigation (internal assessment)	**40** 20 10 10	**60** 40 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.

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International Baccalaureate Diploma Programme Subject Brief

Mathematics: analysis and approaches

First assessments for SL and HL—2021

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.

This IB DP subject brief has three key components:

I. Course description and aims II. Curriculum model overview III. Assessment model

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

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

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: **www.ibo.org/en/dp**.

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

International Baccalaureate Diploma Programme Subject Brief

Mathematics: applications and interpretation

First assessments for SL and HL—2021

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.

This IB DP subject brief has three key components:

I. Course description and aims II. Curriculum model overview III. Assessment model

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

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

The arts:

Visual arts—Higher level

First assessments 2016 – Last assessments 2022

The IB Diploma Programme (DP) is a rigorous, academically challenging and balanced programme of education designed to prepare students aged 16 to 19 for success at university and life beyond. The DP aims to encourage students to be knowledgeable, inquiring, caring and compassionate, and to develop intercultural understanding, open-mindedness and the attitudes necessary to respect and evaluate a range of viewpoints. Approaches to teaching and learning (ATL) within the DP are deliberate strategies, skills and attitudes that permeate the teaching and learning environment. In the DP, students develop skills from five ATL categories: thinking, research, social, self-management and communication.

To ensure both breadth and depth of knowledge and understanding, students must choose at least one subject from five groups: 1) their best language, 2) additional language(s), 3) social sciences, 4) experimental sciences, and 5) mathematics. Students may choose either an arts subject from group 6, or a second subject from groups 1 to 5. At least three and not more than four subjects are taken at higher level (240 recommended teaching hours), while the remaining are taken at standard level (150 recommended teaching hours). In addition, three core elements—the extended essay, theory of knowledge and creativity, action, service—are compulsory and central to the philosophy of the programme.

These IB DP subject briefs illustrate three key course components.
I. Course description and aims II. Curriculum model overview III. Assessment model

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 further study of 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.	**80**

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.	**80**
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.	**80**

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:

1. 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
2. Demonstrate application and analysis of knowledge and understanding
   - 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
3. 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
4. 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 need to be by different artists • 3–5 screens which analyse the extent to which the student's work and practices have been influenced by the art and artists examined • A list of sources used	20
Process portfolio	• 13–25 screens which evidence sustained experimentation, exploration, manipulation and refinement of a variety of art-making activities	40
Internal		40
Exhibition	• A curatorial rationale that does not exceed 700 words • 8–11 artworks • Exhibition text (stating the title, medium, size and intention) for each artwork	40

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International Baccalaureate Diploma Programme Subject Brief

The arts:

Visual arts—Standard level

First assessments 2016 – Last assessments 2022

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To ensure both breadth and depth of knowledge and understanding, students must choose at least one subject from five groups: 1) their best language, 2) additional language(s), 3) social sciences, 4) experimental sciences, and 5) mathematics. Students may choose either an arts subject from group 6, or a second subject from groups 1 to 5. At least three and not more than four subjects are taken at higher level (240 recommended teaching hours), while the remaining are taken at standard level (150 recommended teaching hours). In addition, three core elements—the extended essay, theory of knowledge and creativity, action, service—are compulsory and central to the philosophy of the programme.

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I. Course description and aims

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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:

1. 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
2. Demonstrate application and analysis of knowledge and understanding
   - 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
3. 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
4. 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

Creativity, activity, service

For students graduating in 2017 and after

The IB Diploma Programme (DP) is a rigorous, academically challenging and balanced programme of education designed to prepare students aged 16 to 19 for success at university and life beyond. The DP aims to encourage students to be knowledgeable, inquiring, caring and compassionate, and to develop intercultural understanding, open-mindedness and the attitudes necessary to respect and evaluate a range of viewpoints. Approaches to teaching and learning (ATL) are deliberate strategies, skills and attitudes that permeate the teaching and learning environment. In the DP, students develop skills from five ATL categories: thinking, research, social, self-management and communication.

To ensure both breadth and depth of knowledge and understanding, students must choose six courses from six distinct groups: 1) studies in language and literature; 2) language acquisition; 3) individuals and societies, 4) sciences; 5) mathematics; 6) the arts. Students may chooseto replace the arts course with a second course from one of the other five groups. At least three, and not more than four, subjects are taken at higher level (240 recommended teaching hours), while the remaining are taken at standard level (150 recommended teaching hours). 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.

These DP subject briefs illustrate four key course components.
I. Description and aims
II. Programme overview
III. Learning outcomes
IV. Sample projects

I. Description and aims

Creativity, activity, service (CAS) is at the heart of the DP. With its holistic approach, CAS is designed to strengthen and extend students' personal and interpersonal learning from the Primary Years Programme (PYP) and Middle Years Programme (MYP).

CAS is organized around the three strands of creativity, activity and service defined as follows.

- 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.

CAS aims to develop students who:

- enjoy and find significance in a range of CAS experiences
- purposefully reflect upon their experiences
- identify goals, develop strategies and determine further actions for personal growth
- explore new possibilities, embrace new challenges and adapt to new roles
- actively participate in planned, sustained and collaborative CAS projects
- understand they are members of local and global communities with responsibilities towards each other and the environment.

A CAS experience is a specific event in which the student engages with one or more of the three CAS strands. It can be a single event or an extended series of events. A CAS project is a collaborative series of sequential CAS experiences lasting at least one month. Typically, a student's CAS programme combines planned/unplanned singular and ongoing experiences. All are valuable and may lead to personal development. However, a meaningful CAS programme must be more than just a series of unplanned/singular experiences. Students must be involved in at least one CAS project during the programme.

II. Programme overview

The CAS programme formally begins at the start of the DP and continues regularly for at least 18 months with a reasonable balance between creativity, activity and service.

A CAS experience must:

- fit within one or more of the CAS strands
- be based on a personal interest, skill, talent or opportunity for growth
- provide opportunities to develop the attributes of the IB learner profile
- not be used or included in the student's DP course requirements.

CAS students have guidance at the school level through a variety of resources including the school's CAS handbook, information sessions and meetings. In addition, students have three formal interviews with the school's CAS coordinator/adviser.

Typically, students' service experiences involve the following stages.

- Investigation, preparation and action that meets an identified need.
- Reflection on significant experiences throughout to inform problem-solving and choices.
- Demonstration allowing for sharing of what has taken place.

All CAS students are expected to maintain and complete a CAS portfolio as evidence of their engagement with CAS. The CAS portfolio is a collection of evidence that showcases CAS experiences and student reflections; it is not formally assessed.

A school's CAS programme is evaluated as part of the school's regular programme evaluation and self-study process that assesses the overall implementation of the DP.

III. Learning outcomes

Completion of CAS is based on student achievement of the seven CAS learning outcomes. Through their CAS portfolio, students provide the school with evidence demonstrating achievement of each learning outcome. Some learning outcomes may be achieved many times, while others may be achieved less frequently. In their CAS portfolio, students provide the school with evidence of having achieved each learning outcome at least once through their CAS programme.

Learning outcome	Descriptor
Identify own strengths and develop areas for growth.	Students are able to see themselves as individuals with various abilities and skills, of which some are more developed than others.
Demonstrate that challenges have been undertaken, developing new skills in the process.	A new challenge may be an unfamiliar experience or an extension of an existing one. The newly acquired or developed skills may be shown through new experiences or through increased expertise in an established area.
Demonstrate how to initiate and plan a CAS experience.	Students can articulate the stages from conceiving an idea to executing a plan for individual or collaborative CAS experiences. Students may show their knowledge and awareness by building on a previous experience or by launching a new idea or process.
Show commitment to, and perseverance in, CAS experiences.	Students demonstrate regular involvement and active engagement in CAS.
Demonstrate the skills and recognize the benefits of working collaboratively.	Students are able to identify, demonstrate and critically discuss the benefits and challenges of collaboration gained through CAS experiences.
Demonstrate engagement with issues of global significance.	Students are able to identify and demonstrate their understanding of global issues, make responsible decisions and take appropriate action in response to the issue either locally, nationally or internationally.
Recognize and consider the ethics of choices and actions.	Students show awareness of the consequences of choices and actions in planning and carrying out CAS experiences.

IV. Sample projects

- Creativity: A student group plans, designs and creates a mural.
- Activity: Students organize and participate in a sports team including training sessions and matches against other teams.
- Service: Students set up and conduct tutoring for people in need.
- Service and activity: Students plan and participate in the planting and maintenance of a garden with members of the local community.
- Creativity, activity and service: Students rehearse and perform a dance production for a community retirement home.

About the IB: For nearly 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: ***www.ibo.org/en/programmes/diploma-programme/****.*

Complete subject guides can be accessed through the IB online curriculum centre (OCC) or purchased through the IB store: ***http://store.ibo.org****.*

For more on how the DP prepares students for success at university, visit: ***www.ibo.org/en/university-admission*** *or email:* ***recognition@ibo.org****.*

International Baccalaureate Diploma Programme Subject Brief

Diploma Programme Core:
Extended essay, including the world studies option

First assessment 2018

The IB Diploma Programme (DP) is a rigorous, academically challenging and balanced programme of education designed to prepare students aged 16 to 19 for success at university and life beyond. The DP aims to encourage students to be knowledgeable, inquiring, caring and compassionate, and to develop intercultural understanding, open-mindedness and the attitudes necessary to respect and evaluate a range of viewpoints. Approaches to teaching and learning (ATL) within the DP are deliberate strategies, skills and attitudes that permeate the teaching and learning environment. In the DP, students develop skills from five ATL categories: thinking, research, social, self-management and communication.

To ensure both breadth and depth of knowledge and understanding, students must choose six courses from six distinct groups:
1) studies in language and literature; 2) language acquisition; 3) individuals and societies; 4) sciences; 5) mathematics; 6) the arts. Students may choose to replace the arts course with a second course from one of the other five groups. At least three, and not more than four, subjects are taken at higher level (240 recommended teaching hours), while the remaining are taken at standard level (150 recommended teaching hours). 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.

These DP subject briefs illustrate four key course components.
I. Course description and aims
II. Overview of the extended essay process
III. Assessment model
IV. Sample extended essay topics

I. Course description and aims

The extended essay is a compulsory, externally assessed piece of independent research into a topic chosen by the student and presented as a formal piece of academic writing. The extended essay is intended to promote high-level research and writing skills, intellectual discovery and creativity while engaging students in personal research. This leads to a major piece of formally presented, structured writing of up to 4,000 words in which ideas and findings are communicated in a reasoned, coherent and appropriate manner.

Students are guided through the process of research and writing by an assigned supervisor (a teacher in the school). All students undertake three mandatory reflection sessions with their supervisor, including a short interview, or viva voce, following the completion of the extended essay.

Extended essay topics may be chosen from a list of approved DP subjects—normally one of the student's six chosen subjects for the IB diploma or the world studies option. World studies provides students with the opportunity to carry out an in-depth interdisciplinary study of an issue of contemporary global significance, using two IB disciplines.

The aims of the extended essay are to provide students with the opportunity to:

- engage in independent research with intellectual initiative and rigour
- develop research, thinking, self-management and communication skills
- reflect on what has been learned throughout the research and writing process.

II. Overview of the extended essay process

The extended essay process

The research process

1. Choose the approved DP subject.
2. Choose a topic.
3. Undertake some preparatory reading.
4. **Formulate a well-focused research question.**
5. Plan the research and writing process.
6. Plan a structure (outline headings) for the essay. This may change as the research develops.
7. Carry out the research.

Writing and formal presentation

The required elements of the final work to be submitted are as follows.

- Title page
- Contents page
- Introduction
- Body of the essay
- Conclusion
- References and bibliography

The upper limit of 4,000 words includes the introduction, body, conclusion and any quotations.

Reflection process

As part of the supervision process, students undertake three mandatory reflection sessions with their supervisor. These sessions form part of the formal assessment of the extended essay and research process. The purpose of these sessions is to provide an opportunity for students to reflect on their engagement with the research process and is intended to help students consider the effectiveness of their choices, re-examine their ideas and decide on whether changes are needed. The final reflection session is the viva voce.

The viva voce is a short interview (10–15 minutes) between the student and the supervisor, and is a mandatory conclusion to the process. The viva voce serves as:

- a check on plagiarism and malpractice in general
- an opportunity to reflect on successes and difficulties
- an opportunity to reflect on what has been learned
- an aid to the supervisor's report.

III. Assessment model

The extended essay, including the world studies option, is assessed against common criteria and is interpreted in ways appropriate to each subject. Students are expected to:

- provide a logical and coherent rationale for their choice of topic
- review what has already been written about the topic
- formulate a clear research question
- offer a concrete description of the methods used to investigate the question
- generate reasoned interpretations and conclusions based on their reading and independent research in order to answer the question
- reflect on what has been learned throughout the research and writing process.

Assessment at a glance

Assessment criteria	Description
Focus and method	The topic, the research question and the methodology are clearly stated.
Knowledge and understanding	The research relates to the subject area/discipline used to explore the research question, and knowledge and understanding is demonstrated through the use of appropriate terminology and concepts.
Critical thinking	Critical-thinking skills have been used to analyse and evaluate the research undertaken.
Presentation	The presentation follows the standard format expected for academic writing.
Engagement	The student's engagement with their research focus and the research process.

The extended essay contributes to the student's overall score for the diploma through the award of points in conjunction with theory of knowledge. A maximum of three points are awarded according to a student's combined performance in both the extended essay and theory of knowledge.

IV. Sample extended essay topics

- What is the relationship between the length of an exhaust pipe and the frequency of the sound it emits?
- How far was the Christian Democrat victory in the Italian elections of 1948 influenced by Cold War tensions?
- How effective is Friedrich Dürrenmatt's use of colour to convey his message in the play *Der Besuch der alten Dame*?

International Baccalaureate Diploma Programme Subject Brief

Diploma Programme core: Theory of knowledge

First assessments 2015 – Last assessments 2021

The IB Diploma Programme (DP) is a rigorous, academically challenging and balanced programme of education designed to prepare students aged 16 to 19 for success at university and life beyond. The DP aims to encourage students to be knowledgeable, inquiring, caring and compassionate, and to develop intercultural understanding, open-mindedness and the attitudes necessary to respect and evaluate a range of viewpoints.

To ensure both breadth and depth of knowledge and understanding, students must choose at least one subject from five groups: 1) their best language, 2) additional language(s), 3) social sciences, 4) experimental sciences, and 5) mathematics. Students may choose either an arts subject from group 6, or a second subject from groups 1 to 5. At least three and not more than four subjects are taken at higher level (240 recommended teaching hours), while the remaining are taken at standard level (150 recommended teaching hours). In addition, three core elements—the extended essay, theory of knowledge and creativity, action, service—are compulsory and central to the philosophy of the programme.

These IB DP subject briefs illustrate four key course components.

I. Course description and aims
II. Curriculum model overview
III. Assessment model
IV. Sample questions

I. Course description and aims

Theory of knowledge (TOK) is a course about critical thinking and inquiring into the process of knowing, rather than about learning a specific body of knowledge. It plays a special role in the DP by providing an opportunity for students to reflect on the nature of knowledge, to make connections between areas of knowledge and to become aware of their own perspectives and those of the various groups whose knowledge they share. It is a core element undertaken by all DP students, and schools are required to devote at least 100 hours of class time to the course. The overall aim of TOK is to encourage students to formulate answers to the question "how do you know?" in a variety of contexts, and to see the value of that question. This allows students to develop an enduring fascination with the richness of knowledge.

The aims of the TOK course are to:

- make connections between a critical approach to the construction of knowledge, the academic disciplines and the wider world
- develop an awareness of how individuals and communities construct knowledge and how this is critically examined
- develop an interest in the diversity and richness of cultural perspectives and an awareness of personal and ideological assumptions
- critically reflect on their own beliefs and assumptions, leading to more thoughtful, responsible and purposeful lives
- understand that knowledge brings responsibility which leads to commitment and action.

II. Curriculum model overview

Component
Knowing about knowing TOK examines how we know what we claim to know, by encouraging students to analyse knowledge claims and explore knowledge questions. A knowledge claim is the assertion that "I/we know X" or "I/we know how to Y", or a statement about knowledge; a knowledge question is an open question about knowledge. The distinction between shared knowledge and personal knowledge is intended to help teachers construct their TOK course and to help students explore the nature of knowledge.
Ways of knowing While there are arguably many ways of knowing (WOKs), TOK identifies eight specific WOKs: language, sense perception, emotion, reason, imagination, faith, intuition, and memory. Students must explore a range of ways of knowing, and it is suggested to study four of these in depth.
Areas of knowledge Areas of knowledge are specific branches of knowledge, each of which can be seen to have a distinct nature and different methods of gaining knowledge. TOK distinguishes between eight areas of knowledge: mathematics, the natural sciences, the human sciences, the arts, history, ethics, religious knowledge systems, and indigenous knowledge systems. Students must explore a range of areas of knowledge, and it is suggested to study six of these eight.

III. Assessment model

Having followed the TOK course, students will be expected to demonstrate the following:

- Identify and analyse the various kinds of justifications used to support knowledge claims.
- Formulate, evaluate and attempt to answer knowledge questions.
- Examine how academic disciplines/areas of knowledge generate and shape knowledge.
- Understand the roles played by ways of knowing in the construction of shared and personal knowledge.
- Explore links between knowledge claims, knowledge questions, ways of knowing and areas of knowledge.
- Demonstrate an awareness and understanding of different perspectives and be able to relate these to one's own perspective.
- Explore a real-life/contemporary situation from a TOK perspective in the presentation.

Assessment at a glance

Type of assessment	Format of assessment	Weighting of final grade (%)
External		
Part I: Essay on a prescribed title	One essay on a title chosen from a list of six prescribed titles.	67
Internal		
Part 2: Presentation	One presentation to the class by an individual or a group (max of three persons); approximately 10 minutes per student. One written presentation planning document for each student.	33

TOK contributes to the overall diploma score through the award of points in conjunction with the extended essay. A maximum of three points are awarded according to a student's combined performance in both TOK and the extended essay.

IV. Sample prescribed titles

- Using history and at least one other area of knowledge, examine the claim that it is possible to attain knowledge despite problems of bias and selection.
- "It is a capital mistake to theorize before one has data. Insensibly one begins to twist facts to suit theories, instead of theories to suit facts" (Arthur Conan Doyle). Consider the extent to which this statement may be true in two or more areas of knowledge.
- In what ways may disagreement aid the pursuit of knowledge in the natural and human sciences?

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