SPH KEMANG VILLAGE

Diploma Programme

Grade 11-12

IBDP Subject Handbook

2024-2025

Table of Content

History and background of SPH

From a visionary beginning in 1993, Sekolah Pelita Harapan schools continue to develop as Indonesia's leading Christian schools with a focus on academic excellence, personal growth, and spiritual development.

Our vision of True Knowledge, Faith in Christ and Godly Character sets out our goals for the student: That they may come to understand that all Truth emanates from God the Creator and Sustainer and is to be found ultimately in the relationship with Jesus Christ his Son and our savior. The end result of the acceptance of these truths is the development of Godly character as those made in the image of God.

We aim to achieve this goal by focusing on Christ as the preeminent one in God's plan of redemption in the world's restoration from its brokenness. We want our students to be people of influence and action in the world, well equipped to engage positively wherever they may serve.

We are grounded in an Evangelical, Reformed theology that seeks Truth wherever it may be found and recognizes that all Truth is God's. Using the International Baccalaureate and Cambridge programs allows us to develop mature, thinking, students who are committed to life-long learning and can utilize inquiry to search out the truth.

We welcome people of all faiths and are committed to serving families with a quality education in a holistic approach that helps young people develop their potential and equips them for further study anywhere in the world.

Our Vision

True Knowledge, Faith in Christ and Godly Character

Our Mission

Proclaiming the preeminence of Christ and engaging in the redemptive restoration of all things in Him through holistic education

Sekolah Pelita Harapan provides an environment and an educational experience in which students flourish as they are equipped “to take hold of the life that is truly life” (1 Tim. 6:19).

SPH’s six overall school-wide learner outcomes identify what this flourishing looks like. These Expected Student Outcomes (ESO’s) arise directly from the Mission and Vision, and they operationalize the school’s core purposes. They identify the target that SPH is seeking to hit.

Truth-Seekers	We are thoughtful inquirers engaged in the lifelong pursuit of truth.
Faithful Disciples	We grow as disciples of Jesus Christ as we understand our world with a biblical Christian worldview.
Servant Leaders	We seek to have the character of Christ, treating all people as God's image- bearers.
Confident Communicators	We communicate truth boldly and humbly.
World-Changers	We are people of influence engaged in redemptive restoration in the world.
Flourishing Learners	We live flourishing and resilient lives.

Our Educational Outcomes

Our goal is to cultivate flourishing students who engage in a lifelong pursuit of truth. We seek to develop students who are curious, collaborative and responsible thinkers. We teach our students to analyze carefully and to make reasoned, ethical decisions. They become ready to succeed in university studies as independent lifelong learners. It is our prayer that all students are grounded in the Gospel with the tools to grow spiritually, able to understand and apply a biblical worldview as faithful Christ-followers. Our students grow as principled and reflective individuals with godly character. They gain a strong sense of integrity and honesty, treating others with respect and dignity. We are committed to teaching students to be able to listen and to express themselves well with confidence. They are able to understand, critique and challenge worldviews and their implications, able to work effectively with others of diverse backgrounds and perspectives while maintaining the integrity of beliefs.

We desire to enable students to be hope-filled servant leaders, equipped for lives of action and transformational leadership, pursuing justice, mercy, and peace. They learn to think and act redemptively, treating all people as God's image-bearers, deserving dignity, courtesy, compassion, and cooperation. We teach them to graciously serve the needs of those around them for the sake of Christ as they live well-rounded, healthy and resilient lives.

Rationale

The purpose of this handbook is to provide Grade 11-12 students with a comprehensive understanding of the programme and pathway to graduation in SPH Kemang Village. While the information provided in this document is correct to date, all curriculum and practices are based on the official IB Diploma Programme, subject guides, and SPH Graduation Pathway policy.

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.

(Source: IBDP Subject Briefs)

Guidelines for SPH Diploma with IB Courses

Students who are not enrolled in the IB Diploma Programme may receive an SPH Diploma providing they meet the guidelines listed below.

- Complete Five or six HL/SL subjects with a minimum number of point (six subjects with a minimum of 22/42 or five subjects with a minimum of 19/42)
- Complete SPH Knowledge Course assessment components
- Complete a Senior Essay of 2500 words with a score of C or above
- Complete a minimum of 4 projects for CAS
- PPKn/Indonesian Studies: Score of 4 (out of 7) or above
- Biblical Studies: Score of 4 (out of 7) or better
- Attendance of School student yearly retreats is required
- School Attendance: 85% attendance in all subjects (or provide medical reasoning for not meeting requirements).
- Maintain a satisfactory record of behavior during the duration of study at SPH Kemang Village

Failure to meet any of these requirements means the student is ineligible for SPH Diploma. If that happens, the student would receive the Certificate of Attendance (with transcript of courses) instead.

Course and Level Change Policy

- Course change is allowed within the first TWO weeks of Term 1 in Grade 11 ONLY
- Course level switch is allowed within Term 1 in Grade 11. The final decision is determined by the High School leadership
- Mathematics course change is allowed within Term 1 in Grade 11 ONLY

Conditions of Earning IB Diploma

The IB clearly lists the conditions for candidates to be awarded with their diploma. The following conditions from this section is extracted from the **General Regulations of IB Diploma Programme document by the IBO.**

Candidates for the IB Diploma must satisfy assessment requirements in six subjects and the core. The six subjects must be selected from six groups as described in the relevant handbook for the examination session, with at least three and not more than four subjects being offered at higher level and the others at standard level. Recommended teaching time is 240 hours for higher level courses and 150 hours for standard level courses.

In addition to the six subjects, candidates for the IB Diploma must complete the core requirements of:

a. Course in theory of knowledge including the required assessment, for which the IB recommends at least 100 hours of teaching over the two-year period of the DP

b. CAS activities, for which the IB recommends at least 150 hours for the required combination of experiences

c. An extended essay in a subject available for this purpose to be submitted for assessment, for which the IB recommends approximately 40 hours of work by candidates.

All assessment components for each of the six subjects and the additional Diploma requirements must be completed in order to qualify for the award of the IB Diploma, except under the conditions stipulated in articles 18 and 19 of these regulations (General Regulations of IB Diploma Programme).

The IB Diploma will be awarded to a candidate provided all the following requirements have been met.

1. CAS requirements have been met.
2. The candidate's total points are 24 or more.
3. There is no "N" awarded for theory of knowledge, the extended essay or for a contributing subject.
4. There is no grade E awarded for theory of knowledge and/or the extended essay.
5. There is no grade 1 awarded in a subject/level.
6. There are no more than two grade 2s awarded (HL or SL).
7. There are no more than three grade 3s or below awarded (HL or SL).
8. The candidate has gained 12 points or more on HL subjects (for candidates who register for four HL subjects, the three highest grades count).
9. 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).
10. The candidate has not received a penalty for academic misconduct from the Final Award Committee.

An IB Diploma Candidate who fails to satisfy the requirements for the award of an IB Diploma will receive DP Course Results indicating the grades obtained in individual subjects, together with results in theory of knowledge and the extended essay, and confirmation of the completion of all CAS requirements, as appropriate.

DP Course Candidates receive DP Course Results indicating the results obtained in individual subjects and the core requirements, as appropriate.

A **Bilingual IB Diploma** will be awarded to a successful candidate who fulfills one or both of the following criteria.

(Source: IB DP Regulations Guide)

Completion of two languages selected from group 1 with the award of a grade 3 or higher in both

Completion of one of the subjects from group 3 or group 4 in a language that is not the same as the candidate's group 1 language. The candidate must attain a grade 3 or higher in both the group 1 language and the subject from group 3 or 4.

SPH High School Graduation Policy Statements

The school provides strong counselling about graduation pathways, ensuring that students and parents understand the implications of their decisions.

All graduation pathways require the following minimum standards:

- Biblical Studies: must pass
- Student Retreat attendance is required
- School attendance: 85% attendance in all subjects
  (or provide medical reasoning for not meeting requirements
- Behaviour: maintain a satisfactory record of behaviour
- PPKn: must pass

Graduation Pathways

SPH IB Diploma

- Study and take the exams of six DP subjects
- Achieve a minimum of 24 points
- Three HL subjects with minimum 12 points
- Three SL subjects with minimum 9 points
- TOK grade D or above
- EE grade D or above

- Complete IB expectations for CAS as outlined in the Student Handbook

SPH Diploma

- Study and take the exams of a minimum of five DP subjects at either Higher or Standard Level with a minimum number of points (six subjects have a minimum of 22/42 and five subjects have a minimum of 19/42)

- Take SPH Knowledge Course (see below)

- Complete Senior Essay: 2500 words with a minimum score of C

- CAS (SPH Version): Complete CAS experience and a minimum of 1 project

SPH Advanced Certificate

- Study and take the DP exams of a minimum of three DP subjects at either Higher or Standard Level and achieve a minimum of 12/21

- The subjects must include:
  + DP English A or B
  + DP Indonesian A or B
    (Optional for non-Indonesians)
  + One Group 3 or 4 subject
  + DP Mathematics

- CAS (SPH Version): Complete CAS experience and a minimum of 1 project

SPH Certificate

The Certificate is a personalized pathway that normally involves the following:

- Study and take the DP exams of a minimum of two DP subjects at Standard Level

- Complete the following mandatory subjects and achieve satisfactory results:
  + English
  + Indonesian
  + One Group 3 or 4 subject
  + Mathematics

- CAS (SPH Version): Complete CAS experience and a minimum of 1 project

Diploma Programme

The IB Diploma Programme

International Baccalaureate®
Baccalauréat International
Bachillerato Internacional

Education for a better world

The Diploma Programme: preparing students for success in higher education and to be active participants in a global society

What is an IB education?

The IB continuum of international education for 3 to 19 year olds is unique because of its academic and personal rigour. We challenge students to excel in their studies and in their personal growth. We aim to inspire a quest for learning throughout life that is marked by enthusiasm and empathy.

The IB aspires to help schools develop well-rounded students with character who respond to challenges with optimism and an open mind, are confident in their own identities, make ethical decisions, join with others in celebrating our common humanity and are prepared to apply what they learn in real-world, complex and unpredictable situations.

The IB offers high-quality programmes of international education that share a powerful vision. Informed by the values described in the learner profile, an IB education:

- focuses on learners - the IB's student-centred programmes promote healthy relationships, ethical responsibility and personal challenge
- develops effective approaches to teaching and learning - IB programmes help students to develop the attitudes and skills they need for both academic and personal success
- works within global contexts - IB programmes increase understanding of languages and cultures, and explore globally significant ideas and issues
- explores significant content - IB programmes offer a curriculum that is broad and balanced, conceptual and connected.

IB learners strive to become inquirers, knowledgeable, thinkers, communicators, principled, open-minded, caring, risk-takers, balanced, and reflective. These attributes represent a broad range of human capacities and responsibilities that go beyond intellectual development and academic success.

What is the IB Diploma Programme (DP)?

The IB Diploma Programme (DP) is an academically challenging and balanced programme of education with final examinations that prepares students, aged 16 to 19, for success at university and life beyond. It has been designed to address the intellectual, social, emotional and physical well-being of students. The programme has gained recognition and respect from the world's leading universities.

The Diploma Programme prepares students for effective participation in a rapidly evolving and increasingly global society as they:

- develop physically, intellectually, emotionally and ethically
- acquire breadth and depth of knowledge and understanding, studying courses from six subject groups
- develop the skills and a positive attitude towards learning that will prepare them for higher education
- study at least two languages and increase understanding of cultures, including their own
- make connections across traditional academic disciplines and explore the nature of knowledge through the programme's unique theory of knowledge course
- undertake in-depth research into an area of interest through the lens of one or more academic disciplines in the extended essay
- enhance their personal and interpersonal development through creativity, action and service.

The curriculum

IB Diploma Programme students must choose one subject from each of the five groups (1 to 5), ensuring breadth of knowledge and understanding in their best language, additional language(s), the social sciences, the experimental sciences and mathematics. Students must also choose either an arts subject from group 6, or a second subject from groups 1 to 5.

DP subjects can be taken at higher level or standard level.

At least three and not more than four subjects are taken at higher level (240 teaching hours), while the other subjects are taken at standard level (150 teaching hours). Students can study and take examinations, in English, French or Spanish.

Two DP subjects are classified as interdisciplinary subjects and so satisfy the requirements of more than one subject group:

- Literature and performance - group 1 and group 6
- Environmental systems - group 3 and group 4

In addition to disciplinary and interdisciplinary study, the Diploma Programme features three core elements that broaden students' educational experience and challenge them to apply their knowledge and skills.

The Diploma Programme core

- **The extended essay** asks students to engage in independent research through an in-depth study of a question relating to one of the DP subjects they are studying. The world studies extended essay option allows students to focus on a topic of global significance which they examine through the lens of at least two DP subjects.
- **Theory of knowledge** develops a coherent approach to learning that unifies the academic disciplines. In this course on critical thinking, students inquire into the nature of knowing and deepen their understanding of knowledge as a human construction.
- **Creativity, action, service (CAS)** involves students in a range of activities alongside their academic studies throughout the Diploma Programme. Creativity encourages students to engage in the arts and creative thinking. Action seeks to develop a healthy lifestyle through physical activity. Service with the community offers a vehicle for new learning with academic value. The three strands of CAS enhance students' personal and interpersonal development through experiential learning and enable journeys of self-discovery.

Diploma Programme subject groups

Group 1 – Studies in language and literature

Language A: literature – *55 languages offered*
Language A: language and literature – *16 languages offered*
Literature and performance (also group 6) – *3 languages offered*

Group 2 – Language acquisition

Language B –*23 languages offered*
Language ab initio –*12 languages offered*
Classical languages – *2 languages offered*

Group 3 – Individuals and societies

- Business and management
- Economics
- Geography
- History
- Information technology in a global society
- Philosophy
- Psychology
- Social and cultural anthropology
- World religions (SL only)
- Environmental systems and societies (also group 4)

Group 4 – Sciences

- Biology
- Chemistry
- Design technology
- Environmental systems and societies (also group 3)
- Physics
- Computer science
- Sports, exercise and health science (SL only)

Group 5 – Mathematics

- Mathematical studies SL
- Further Mathematics HL
- Mathematics SL
- Mathematics HL

Group 6 – The arts

- Music
- Theatre
- Visual arts
- Dance
- Film
- Literature and performance (also group 1)

Diploma Programme courses online

Students can enrol in a range of authorized DP courses online offered via their IB World School through Pamoja Education Ltd.

Assessment

Students take written examinations at the end of the programme, which are marked by external IB examiners. Students also complete assessment tasks in the school, which are either initially marked by teachers and then moderated by external moderators or sent directly to external examiners.

The marks awarded for each course range from 1 (lowest) to 7 (highest). Students can also be awarded up to three additional points for their combined results on theory of knowledge and the extended essay. The diploma is awarded to students who gain at least 24 points, subject to certain minimum levels of performance across the whole programme and to satisfactory participation in the creativity, action, service requirement. The highest total that a Diploma Programme student can be awarded is 45 points.

Assessment is criterion-related, which means student performance is measured against pre-specified assessment criteria based on the aims and objectives of each subject curriculum, rather than the performance of other students taking the same examinations. The range of scores that students have attained remains statistically stable, and universities value the rigour and consistency of Diploma Programme assessment practice.

Quality assurance and professional development

Any school, or group of schools, wishing to offer one or more IB programmes as an IB World School must first be authorized. The requirements are the same for all schools, and the procedure is designed to ensure that schools are well prepared to implement the programme(s) successfully. All IB World Schools are required to participate in an ongoing process of review and development, using the same programme standards and practices.

As part of its ongoing commitment to the development of a highly skilled global learning community, the IB provides a wide range of high-quality professional development opportunities to help new, experienced and expert school leaders and educators understand, support, and successfully deliver IB programmes reflecting IB standards and practices.

"At King Edward's School we made the decision to move to a solely IB Diploma curriculum because we believed that it would provide a really challenging education and would be the best preparation for university study".

John Claughton, Chief Master, King Edward's School, Birmingham UK.

The IB Mission

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

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

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

- Become an IB student
- Teach at an IB World School
- Become an IB World School
- Volunteer or work for the IB

Support our mission and join the IB community at http://www.ibo.org or contact your IB regional office:

IB Africa, Europe and Middle East
IB Asia-Pacific
IB Americas

ibaem@ibo.org
ibap@ibo.org
iba@ibo.org

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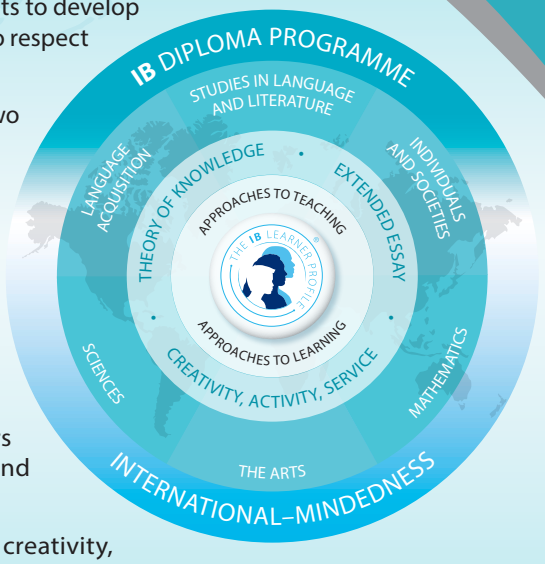
International Baccalaureate Diploma Programme Subject Brief

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

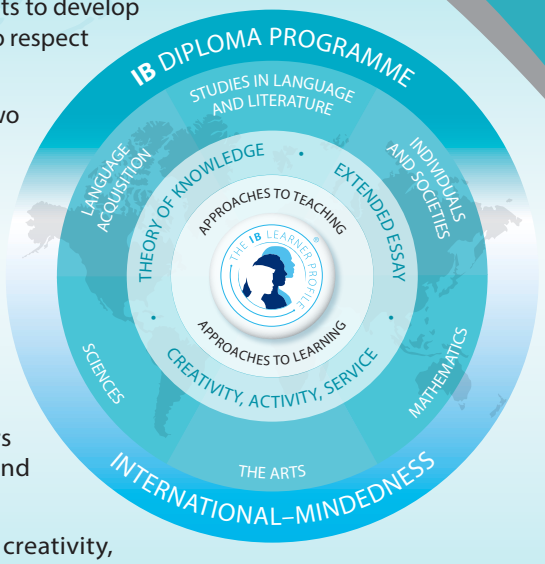
Type of assessment	Format of assessment	Time (hours)		Weighting of final grade (%)	
		SL	HL	SL	HL
External					
Paper 1: Guided literary analysis	Guided analysis of unseen literary passage/ passages from different text types.	1.25	2.25	35	35
Paper 2: Comparative essay	Comparative essay based on two literary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

Language ab initio

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.

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

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

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

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

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

II. Curriculum model overview

The curriculum is organized around five prescribed themes and 20 prescribed topics with which the students engage though written, audio, visual and audio-visual texts.

Students develop into successful, effective communicators by considering the conceptual understandings of context, audience, purpose, meaning and variation.

Communication is evidenced through receptive, productive and interactive skills.

III. Assessment model

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

- Communicate clearly and effectively in a range of contexts and for a variety of purposes.
- Understand and use language appropriate to a range of 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 ab initio SL assessment outline		Weighting
External 75%	**Paper 1** (productive skills) Two written tasks—each from a choice of three Writing—30 marks	**25%**
	Paper 2 (receptive skills) Separate sections for listening and reading Listening—25 marks Reading—40 marks	**25%** **25%**
Internal 25%	**Individual oral assessment** 30 marks	**25%**

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

IV. Content outline

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

International Baccalaureate
Diploma Programme Subject Brief

Individuals and societies: Business management—higher level

First assessments 2024

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

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

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

I. Course description and aims

The business management course is designed to meet the current and future needs of students who want to develop their knowledge of business content, concepts and tools to assist with business decision-making. Future employees, business leaders, entrepreneurs or social entrepreneurs need to be confident, creative and compassionate as **change agents** for business in an increasingly interconnected global marketplace. The business management course is designed to encourage the development of these attributes.

Through the exploration of four interdisciplinary concepts: **creativity, change, ethics** and **sustainability**, this course empowers students to explore these concepts from a business perspective. Business management focuses on business functions, management processes and decision-making in contemporary contexts of strategic uncertainty.

Students examine how business decisions are influenced by factors that are internal and external to an organization and how these decisions impact upon a range of internal and external stakeholders. Emphasis is placed on strategic decision-making and the operational business functions of human resource management, finance and accounts, marketing, and operations management.

Business management is a challenging and dynamic discipline that more than meets the needs of our students growing and developing in a complex business environment. This course prepares students to be global citizens ready to face up to the challenges and opportunities awaiting them in our ever-changing world.

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

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

II. Curriculum model overview

Component	Recommended teaching hours
Unit 1: Introduction to business management 1.1 What is a business? 1.2 Types of business entities 1.3 Business objectives 1.4 Stakeholders 1.5 Growth and evolution 1.6 Multinational companies (MNCs)	**20**
Unit 2: Human resource management 2.1 Introduction to human resource management 2.2 Organizational structure 2.3 Leadership and management 2.4 Motivation and demotivation 2.5 Organizational (corporate) culture (HL only) 2.6 Communication 2.7 Industrial/employee relations (HL only)	**35**
Unit 3: Finance and accounts 3.1 Introduction to finance 3.2 Sources of finance 3.3 Costs and revenues 3.4 Final accounts 3.5 Profitability and liquidity ratio analysis 3.6 Debt/equity ratio analysis (HL only) 3.7 Cash flow 3.8. Investment appraisal 3.9 Budgets (HL only)	**45**
Unit 4: Marketing 4.1 Introduction to marketing 4.2 Marketing planning 4.3 Sales forecasting (HL only) 4.4 Market research 4.5 The seven Ps of the marketing mix 4.6 International marketing (HL only)	**35**

Unit 5: Operations management 5.1 Introduction to operations management 5.2 Operations methods 5.3 Lean production and quality management (HL only) 5.4 Location 5.5 Break-even analysis 5.6 Production planning (HL only) 5.7 Crisis management and contingency planning (HL only) 5.8 Research and development (HL only) 5.9 Management information systems (HL only)	**45**
Business management toolkit	**35**
Research time allocated for the pre-released statement in paper 1	**5**
Internal assessment	**20**

III. Assessment model

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

AO1: Knowledge and understanding
Demonstrate knowledge and understanding of:
- business management tools and theories
- course topics and concepts
- business problems, issues and decisions
- HL extension topics (HL only).

AO2: Application and analysis
Apply and analyse:
- business management tools and theories
- course topics and concepts
- business problems, issues and decisions
- business decisions and issues through the selection and use of appropriate data
- HL extension topics (HL only).

AO3: Synthesis and evaluation
Synthesize and evaluate:
- business management tools and theories
- course topics and concepts
- business problems, issues and decisions
- stakeholder interests to reach informed business decisions
- recommendations for competing future strategic options (HL only)
- HL extension topics (HL only).

AO4: Use and application of appropriate skills
- Select and apply relevant business management tools, theories and concepts to support research into a business issue or problem.
- Select, interpret and analyse business materials from a range of primary and secondary sources.
- Create well-structured materials using business management terminology.

- Communicate analysis, evaluation and conclusions of research effectively.

Assessment at a glance

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

IV. Sample questions

Paper 1

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

Paper 2

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

Paper 3

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

International Baccalaureate
Diploma Programme Subject Brief

Individuals and societies: Business management—standard level

First assessments 2024—last assessments 2031

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

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

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

I. Course description and aims

The business management course is designed to meet the current and future needs of students who want to develop their knowledge of business content, concepts and tools to assist with business decision-making. Future employees, business leaders, entrepreneurs or social entrepreneurs need to be confident, creative and compassionate as **change agents** for business in an increasingly interconnected global marketplace. The business management course is designed to encourage the development of these attributes.

Through the exploration of four interdisciplinary concepts: **creativity, change, ethics** and **sustainability**, this course empowers students to explore these concepts from a business perspective. Business management focuses on business functions, management processes and decision-making in contemporary contexts of strategic uncertainty.

Students examine how business decisions are influenced by factors that are internal and external to an organization and how these decisions impact upon a range of internal and external stakeholders. Emphasis is placed on strategic decision-making and the operational business functions of human resource management, finance and accounts, marketing, and operations management.

Business management is a challenging and dynamic discipline that more than meets the needs of our students growing and developing in a complex business environment. This course prepares students to be global citizens ready to face up to the challenges and opportunities awaiting them in our ever-changing world.

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

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

II. Curriculum model overview

Component	Recommended teaching hours
Unit 1: Introduction to business management 1.1 What is a business? 1.2 Types of business entities 1.3 Business objectives 1.4 Stakeholders 1.5 Growth and evolution 1.6 Multinational companies (MNCs)	**20**
Unit 2: Human resource management 2.1 Introduction to human resource management 2.2 Organizational structure 2.3 Leadership and management 2.4 Motivation and demotivation 2.5 Organizational (corporate) culture (HL only) 2.6 Communication 2.7 Industrial/employee relations (HL only)	**20**
Unit 3: Finance and accounts 3.1 Introduction to finance 3.2 Sources of finance 3.3 Costs and revenues 3.4 Final accounts 3.5 Profitability and liquidity ratio analysis 3.6 Debt/equity ratio analysis (HL only) 3.7 Cash flow 3.8. Investment appraisal 3.9 Budgets (HL only)	**30**
Unit 4: Marketing 4.1 Introduction to marketing 4.2 Marketing planning 4.3 Sales forecasting (HL only) 4.4 Market research 4.5 The seven Ps of the marketing mix 4.6 International marketing (HL only)	**30**

Unit 5: Operations management 5.1 Introduction to operations management 5.2 Operations methods 5.3 Lean production and quality management (HL only) 5.4 Location 5.5 Break-even analysis 5.6 Production planning (HL only) 5.7 Crisis management and contingency planning (HL only) 5.8 Research and development (HL only) 5.9 Management information systems (HL only)	**15**
Business management toolkit	**10**
Research time allocated for the pre-released statement in paper 1	**5**
Internal assessment	**20**

III. Assessment model

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

AO1: Knowledge and understanding
Demonstrate knowledge and understanding of:
- business management tools and theories
- course topics and concepts
- business problems, issues and decisions
- HL extension topics (HL only).

AO2: Application and analysis
Apply and analyse:
- business management tools and theories
- course topics and concepts
- business problems, issues and decisions
- business decisions and issues through the selection and use of appropriate data
- HL extension topics (HL only).

AO3: Synthesis and evaluation
Synthesize and evaluate:
- business management tools and theories
- course topics and concepts
- business problems, issues and decisions
- stakeholder interests to reach informed business decisions
- recommendations for competing future strategic options (HL only)
- HL extension topics (HL only).

AO4: Use and application of appropriate skills
- Select and apply relevant business management tools, theories and concepts to support research into a business issue or problem.
- Select, interpret and analyse business materials from a range of primary and secondary sources.
- Create well-structured materials using business management terminology.

- Communicate analysis, evaluation and conclusions of research effectively.

Assessment at a glance

Type of assessment	Format of assessment	Time	Weighting of final grade (%)
External		3 hours	70
Paper 1	Based on a pre-released statement that specifies the *context* and *background* for the unseen case study	1 hour 30 minutes	35
Paper 2	Based on unseen stimulus material with a quantitative focus	1 hour 30 minutes	35
Internal			
Business research project	Students produce a research project about a real business issue or problem facing a particular organization using a conceptual lens	20 hours	30

IV. Sample questions

Paper 1

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

Paper 2

- Using the information in the stimulus, evaluate WM's decision to shift from mass production to mass customization. [10]

International Baccalaureate Diploma Programme Subject Brief

Individuals and societies: Psychology

First assessment 2019

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. Sample questions

I. Course description and aims

At the core of the DP psychology course is an introduction to three different approaches to understanding behaviour: the biological, cognitive and sociocultural approaches. Students study and critically evaluate the knowledge, concepts, theories and research that have developed the understanding in these fields.

The interaction of these approaches to studying psychology forms the basis of a holistic and integrated approach to understanding mental processes and behaviour as a complex, dynamic phenomenon, allowing students to appreciate the diversity as well as the commonality between their own behaviour and that of others.

The contribution and the interaction of the three approaches is understood through the four options in the course, focusing on areas of applied psychology: abnormal psychology, developmental psychology, health psychology, and the psychology of relationships. The options provide an opportunity to take what is learned from the study of the approaches to psychology and apply it to specific lines of inquiry.

Psychologists employ a range of research methods, both qualitative and quantitative, to test their observations and hypotheses. DP psychology promotes an understanding of the various approaches to research and how they are used to critically reflect on the evidence as well as assist in the design, implementation, analysis and evaluation of the students' own investigations. Surrounding the approaches and the options are the overarching themes of research and ethics. A consideration of both is paramount to the nature of the subject.

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

- develop an understanding of the biological, cognitive and socio-cultural factors affecting mental processes and behaviour
- apply an understanding of the biological, cognitive and sociocultural factors affecting mental processes and behaviour to at least one applied area of study
- understand diverse methods of inquiry
- understand the importance of ethical practice in psychological research in general and observe ethical practice in their own inquiries
- ensure that ethical practices are upheld in all psychological inquiry and discussion
- develop an awareness of how psychological research can be applied to address real-world problems and promote positive change
- 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

Syllabus component	Teaching hours SL	Teaching hours HL
Core • Biological approach to understanding behaviour • Cognitive approach to understanding behaviour • Sociocultural approach to understanding behaviour • Approaches to researching behaviour	90 20	120 60
Options • Abnormal psychology • Developmental psychology • Health psychology • Psychology of human relationships	20	40
Internal assessment Experimental study	20	20
Total teaching hours	150	240

III. Assessment model

By the end of the psychology course at SL or at HL, students will be expected to demonstrate the following.

1. Knowledge and comprehension of specified content
   - Demonstrate knowledge and comprehension of:
     - key terms and concepts in psychology
     - a range of psychological theories and studies
     - the biological, cognitive and sociocultural approaches to mental processes and behaviour
     - research methods used in psychology.
2. Application and analysis
   - Demonstrate an ability to use examples of psychological research and psychological concepts to formulate an argument in response to a specific question.
   - Demonstrate application and analysis of:
     - a range of psychological theories and research studies
     - the knowledge relevant to areas of applied psychology.
   - At HL only, analyse qualitative and quantitative research in psychology.
3. Synthesis and evaluation
   - Evaluate the contribution of:
     - psychological theories to understanding human psychology
     - research to understanding human psychology
     - the theories and research in areas of applied psychology.
   - At HL only, evaluate research scenarios from a methodological and ethical perspective.
4. Selection and use of skills appropriate to psychology
   - Demonstrate the acquisition of skills required for experimental design, data collection and presentation, data analysis and the evaluation of a simple experiment while demonstrating ethical practice.
   - Work in a group to design a method for a simple experimental investigation, organize the investigation and record the required data for a simple experiment.
   - Write a report of a simple experiment.

Assessment at a glance

Type of assessment	Format of assessment	Time (hours) SL	Time (hours) HL	Weighting of final grade (%) SL	Weighting of final grade (%) HL
External		3	5	75	80
Paper 1	Three short answer questions on the core. One essay from a choice of three on the biological, cognitive and sociocultural approaches. **HL only:** essays will reference additional HL topic.	2	2	50	40
Paper 2	**SL:** one question from a choice of three on one option. **HL:** two questions; one each from a choice of three on two options.	1	2	25	20
Paper 3	Three short answer questions on approaches to research.		1		20
Internal		20	20	25	20
Experimental study	A report on an experimental study undertaken by the student.	20	20	25	20

IV. Sample questions

- Outline one study investigating schema.
- Discuss ethical considerations linked to genetic research into human behaviour.
- **(HL only)** Discuss how the use of technology affects one cognitive process.

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.

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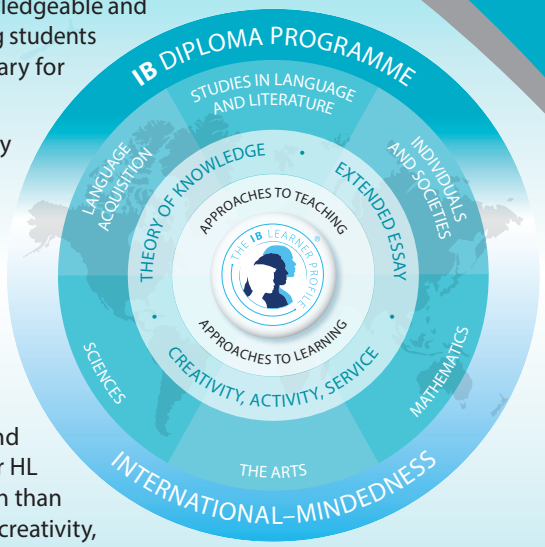
Complete subject guides can be accessed through the programme resource centre or purchased through the IB store: **store.ibo.org**.
For more on how the DP prepares students for success at university, visit: **www.ibo.org/en/university-admission**.

International Baccalaureate Diploma Programme Subject Brief

Individuals and societies: 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.

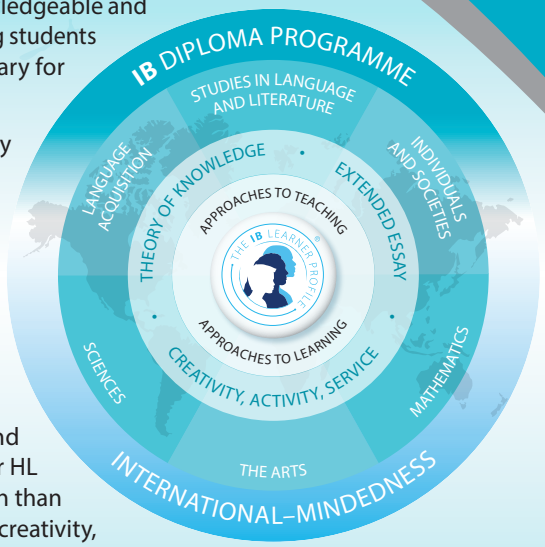
Paper 3
- Using the data provided, and your knowledge of economics, recommend a policy that could be introduced by the government of Country X in response to the expected fall in the world price of coffee.

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

Sciences: Physics

First assessment 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.

I. Course description and aims

As one of the three natural sciences in the IB Diploma Programme, physics is concerned with an attempt to understand the natural world; from determining the nature of the atom to finding patterns in the structure of the universe. It is the search for answers from how the universe exploded into life to the nature of time itself. Observations are 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 leading to a better understanding of the natural world, physics gives us the ability to alter our environments.

DP physics enables students to constructively engage with topical scientific issues. Students examine scientific knowledge claims in a real-world context, fostering interest and curiosity. By exploring the subject, they develop understandings, skills and techniques which can be applied across their studies and beyond.

Integral to the student experience of the DP physics course is the learning that takes place through scientific inquiry both in the classroom and the laboratory.

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

1. develop conceptual understanding that allows connections to be made between different areas of the subject, and to other DP sciences subjects
2. acquire and apply a body of knowledge, methods, tools and techniques that characterize science
3. develop the ability to analyse, evaluate and synthesize scientific information and claims
4. develop the ability to approach unfamiliar situations with creativity and resilience
5. design and model solutions to local and global problems in a scientific context
6. develop an appreciation of the possibilities and limitations of science
7. develop technology skills in a scientific context

8. develop the ability to communicate and collaborate effectively
9. develop awareness of the ethical, environmental, economic, cultural and social impact of science.

II. Curriculum model overview

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

The DP physics course is built on:

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

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

Syllabus component	Recommended teaching hours	
	SL	HL
Syllabus content	**110**	**180**
A Space, time and motion A.1 Kinematics • A.2 Forces and momentum • A.3 Work, energy and power • A.4 Rigid body mechanics ••• A.5 Galilean and special relativity •••	27	42
B. The particulate nature of matter B.1 Thermal energy transfers • B.2 Greenhouse effect • B.3 Gas laws • B.4 Thermodynamics ••• B.5 Current and circuits •	24	32
C. Wave behaviour C.1 Simple harmonic motion •• C.2 Wave model • C.3 Wave phenomena •• C.4 Standing waves and resonance • C.5 Doppler effect ••	17	29
D. Fields D.1 Gravitational fields •• D.2 Electric and magnetic fields •• D.3 Motion in electromagnetic fields • D.4 Induction •••	19	38

E. Nuclear and quantum physics E.1 Structure of the atom •• E.2 Quantum physics ••• E.3 Radioactive decay •• E.4 Fission • E.5 Fusion and stars •	23	39
Experimental programme	**40**	**60**
Practical work	20	40
Collaborative sciences project	10	10
Scientific investigation	10	10

Key to table:

• Topics with content that should be taught to all students

•• Topics with content that should be taught to all students plus additional HL content

••• Topics with content that should only be taught to HL students

Skills in the study of physics

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

Tools

- Experimental techniques
- Technology
- Mathematics

Inquiry process

- Exploring and designing
- Collecting and processing data
- Concluding and evaluating

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

III. Assessment model

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

Assessment objective 1

Demonstrate knowledge of:

- terminology, facts and concepts
- skills, techniques and methodologies.

Assessment objective 2

Understand and apply knowledge of:

- terminology and concepts
- skills, techniques and methodologies.

Assessment objective 3

Analyse, evaluate, and synthesize:

- experimental procedures
- primary and secondary data
- trends, patterns and predictions.

Assessment objective 4

Demonstrate the application of 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	
External		**3**	**4.5**	**80**
Paper 1	Paper 1A: Multiple-choice questions Paper 1B: Data-based questions	1.5	2	36
Paper 2	Short-answer and extended-response questions	1.5	2.5	44
Internal		**10**		**20**
Scientific investigation	The scientific investigation is an open-ended task in which the student gathers and analyses data in order to answer their own formulated research question. The outcome of the scientific investigation will be assessed through the form of a written report. The maximum overall word count for the report is 3,000 words.	10		20

International Baccalaureate
Diploma Programme Subject Brief

Sciences: Chemistry

First assessment 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.

I. Course description and aims

As one of the three natural sciences in the IB Diploma Programme, chemistry is primarily concerned with identifying patterns that help to explain matter at the microscopic level. This then allows matter's behaviour to be predicted and controlled at a macroscopic level. The subject therefore emphasizes the development of representative models and explanatory theories, both of which rely heavily on creative but rational thinking.

DP chemistry enables students to constructively engage with topical scientific issues. Students examine scientific knowledge claims in a real-world context, fostering interest and curiosity. By exploring the subject, they develop understandings, skills and techniques which can be applied across their studies and beyond.

Integral to the student experience of the DP chemistry course is the learning that takes place through scientific inquiry both in the classroom and the laboratory.

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

1. develop conceptual understanding that allows connections to be made between different areas of the subject, and to other DP sciences subjects
2. acquire and apply a body of knowledge, methods, tools and techniques that characterize science
3. develop the ability to analyse, evaluate and synthesize scientific information and claims
4. develop the ability to approach unfamiliar situations with creativity and resilience
5. design and model solutions to local and global problems in a scientific context
6. develop an appreciation of the possibilities and limitations of science
7. develop technology skills in a scientific context
8. develop the ability to communicate and collaborate effectively
9. develop awareness of the ethical, environmental, economic, cultural and social impact of science.

II. Curriculum model overview

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

The DP chemistry course is built on:

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

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

Syllabus component	Recommended teaching hours	
	SL	HL
Syllabus content	**110**	**180**
Structure 1. Models of the particulate nature of matter Structure 1.1—Introduction to the particulate nature of matter Structure 1.2—The nuclear atom Structure 1.3—Electron configurations Structure 1.4—Counting particles by mass: The mole Structure 1.5—Ideal gases	17	21
Structure 2. Models of bonding and structure Structure 2.1—The ionic model Structure 2.2—The covalent model Structure 2.3—The metallic model Structure 2.4—From models to materials	20	30
Structure 3. Classification of matter Structure 3.1—The periodic table: Classification of elements Structure 3.2—Functional groups: Classification of organic compounds	16	31
Reactivity 1. What drives chemical reactions? Reactivity 1.1—Measuring enthalpy change Reactivity 1.2—Energy cycles in reactions Reactivity 1.3—Energy from fuels Reactivity 1.4—Entropy and spontaneity (Additional higher level)	12	22
Reactivity 2. How much, how fast and how far? Reactivity 2.1—How much? The amount of chemical change Reactivity 2.2—How fast? The rate of chemical change Reactivity 2.3—How far? The extent of chemical change	21	31

Reactivity 3. What are the mechanisms of chemical change? Reactivity 3.1—Proton transfer reactions Reactivity 3.2—Electron transfer reactions Reactivity 3.3—Electron sharing reactions Reactivity 3.4—Electron-pair sharing reactions	24	45
Experimental programme	**40**	**60**
Practical work	20	40
Collaborative sciences project	10	10
Scientific investigation	10	10

Skills in the study of chemistry

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

Tools

- Experimental techniques
- Technology
- Mathematics

Inquiry process

- Exploring and designing
- Collecting and processing data
- Concluding and evaluating

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

III. Assessment model

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

Assessment objective 1

Demonstrate knowledge of:

- terminology, facts and concepts
- skills, techniques and methodologies.

Assessment objective 2

Understand and apply knowledge of:

- terminology and concepts
- skills, techniques and methodologies.

Assessment objective 3

Analyse, evaluate, and synthesize:

- experimental procedures
- primary and secondary data
- trends, patterns and predictions.

Assessment objective 4

Demonstrate the application of 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	
External		**3**	**4.5**	**80**
Paper 1	Paper 1A: Multiple-choice questions Paper 1B: Data-based questions and questions on experimental work	1.5	2	36
Paper 2	Short answer and extended-response questions	1.5	2.5	44
Internal		**10**		**20**
Scientific investigation	The scientific investigation is an open-ended task in which the student gathers and analyses data in order to answer their own formulated research question. The outcome of the scientific investigation will be assessed through the form of a written report. The maximum overall word count for the report is 3,000 words.	10		20

International Baccalaureate
Diploma Programme Subject Brief

Sciences: Biology

First assessment 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.

I. Course description and aims

As one of the three natural sciences in the IB Diploma Programme, biology is primarily concerned with the study of life and living systems. Biologists attempt to make sense of the world through a variety of approaches and techniques, controlled experimentation and collaboration between scientists. At a time of global introspection on human activities and their impact on the world around us, developing and communicating a clear understanding of the living world has never been of greater importance than it is today.

Through the study of DP biology, students are empowered to make sense of living systems through unifying themes. By providing opportunities for students to explore conceptual frameworks, they are better able to develop understanding and awareness of the living world around them. This is carried further through a study of interactions at different levels of biological organization, from molecules and cells to ecosystems and the biosphere. Integral to the student experience of the DP biology course is the learning that takes place through scientific inquiry. With an emphasis on experimental work, teachers provide students with opportunities to ask questions, design experiments, collect and analyse data, collaborate with peers, and reflect, evaluate and communicate their findings.

DP biology enables students to constructively engage with topical scientific issues. Students examine scientific knowledge claims in a real-world context, fostering interest and curiosity. By exploring the subject, they develop understandings, skills and techniques which can be applied across their studies and beyond.

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

1. develop conceptual understanding that allows connections to be made between different areas of the subject, and to other DP sciences subjects
2. acquire and apply a body of knowledge, methods, tools and techniques that characterize science
3. develop the ability to analyse, evaluate and synthesize scientific information and claims
4. develop the ability to approach unfamiliar situations with creativity and resilience
5. design and model solutions to local and global problems in a scientific context
6. develop an appreciation of the possibilities and limitations of science
7. develop technology skills in a scientific context
8. develop the ability to communicate and collaborate effectively
9. develop awareness of the ethical, environmental, economic, cultural and social impact of science.

II. Curriculum model overview

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

The DP biology course is built on:

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

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

Syllabus component	Recommended teaching hours	
	SL	HL
Syllabus content	**110**	**180**
Unity and diversity • Water • Nucleic acids • Origins of cells * • Cell structure • Viruses * • Diversity of organisms • Classification and cladistics * • Evolution and speciation • Conservation of biodiversity	**19**	**33**

Syllabus component	Recommended teaching hours	
	SL	HL
Form and function • Carbohydrates and lipids • Proteins • Membranes and membrane transport • Organelles and compartmentalization • Cell specialization • Gas exchange • Transport • Muscle and motility * • Adaptation to environment • Ecological niches	**26**	**39**
Interaction and interdependance • Enzymes and metabolism • Cell respiration • Photosynthesis • Chemical signalling * • Neural signalling • Integration of body systems • Defence against disease • Populations and communities • Transfer of energy and matter	**31**	**48**
Continuity and change • DNA replication • Protein synthesis • Mutations and gene editing • Cell and nuclear division • Gene expression * • Water potential • Reproduction • Inheritance • Homeostasis • Natural selection • Sustainability and change • Climate change	**34**	**60**
Experimental programme	**40**	**60**
Practical work	20	40
Collaborative sciences project	10	10
Scientific investigation	10	10

* Topics with content that should only be taught to HL students

Skills in the study of biology

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

Tools

- Experimental techniques
- Technology
- Mathematics

Inquiry process

- Exploring and designing
- Collecting and processing data
- Concluding and evaluating

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

III. Assessment model

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

Assessment objective 1

Demonstrate knowledge of:

- terminology, facts and concepts
- skills, techniques and methodologies.

Assessment objective 2

Understand and apply knowledge of:

- terminology and concepts
- skills, techniques and methodologies.

Assessment objective 3

Analyse, evaluate, and synthesize:

- experimental procedures
- primary and secondary data
- trends, patterns and predictions.

Assessment objective 4

Demonstrate the application of 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	
External		**3**	**4.5**	**80**
Paper 1	Paper 1A: Multiple-choice questions Paper 1B: Data-based questions (four questions that are syllabus related, addressing all themes)	1.5	2	36
Paper 2	Data-based and short-answer questions Extended-response questions	1.5	2.5	44
Internal		**10**		**20**
Scientific investigation	The scientific investigation is an open-ended task in which the student gathers and analyses data in order to answer their own formulated research question. The outcome of the scientific investigation will be assessed through the form of a written report. The maximum overall word count for the report is 3,000 words.	10		20

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International Baccalaureate Diploma Programme Subject Brief

Sciences:

Computer science – Higher level

First assessments 2014

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

The IB DP computer science HL course requires an understanding of the fundamental concepts of computational thinking as well as knowledge of how computers and other digital devices operate. The course, underpinned by conceptual thinking, draws on a wide spectrum of knowledge, and enables and empowers innovation, exploration and the acquisition of further knowledge. Students study how computer science interacts with and influences cultures, society and how individuals and societies behave, and the ethical issues involved. During the course the student will develop computational solutions. This will involve the ability to:

- identify a problem or unanswered question
- design, prototype and test a proposed solution
- liaise with clients to evaluate the success of the proposed solution and make recommendations for future developments.

The aims of the computer science HL courses are to:

- provide opportunities for study and creativity within a global context that will stimulate and challenge students developing the skills necessary for independent and lifelong learning
- provide a body of knowledge, methods and techniques that characterize computer science
- enable students to apply and use a body of knowledge, methods and techniques that characterize computer science
- demonstrate initiative in applying thinking skills critically to identify and resolve complex problems
- engender an awareness of the need for, and the value of, effective collaboration and communication in resolving complex problems
- develop logical and critical thinking as well as experimental, investigative and problem-solving skills
- develop and apply the students' information and communication technology skills in the study of computer science to communicate information confidently and effectively
- raise awareness of the moral, ethical, social, economic and environmental implications of using science and technology
- develop an appreciation of the possibilities and limitations associated with continued developments in IT systems and computer science
- encourage an understanding of the relationships between scientific disciplines and the overarching nature of the scientific method.

II. Curriculum model overview

Component	Recommended teaching hours
Core syllabus content	
SL/HL core • Topic 1: System fundamentals • Topic 2: Computer organization • Topic 3: Networks • Topic 4: Computational thinking, problem-solving and programming	80
HL extension • Topic 5: Abstract data structures • Topic 6: Resource management • Topic 7: Control	45
Case study Additional subject content introduced by the annually issued case study	30

Option **SL/HL core** **HL extension** Students study one of the following options: • Option A: Databases • Option B: Modelling and simulation • Option C: Web science • Option D: Object-oriented programming (OOP)	 30 15
Internal assessment **Solution** Practical application of skills through the development of a product and associated documentation	30
Group 4 project	10

III. Assessment model

Having followed the computer science higher level course, students will be expected to:

Know and understand:
- relevant facts and concepts
- appropriate methods and techniques
- computer science terminology
- methods of presenting information.

Apply and use:
- relevant facts and concepts
- relevant design methods and techniques
- terminology to communicate effectively
- appropriate communication methods to present information.

Construct, analyse, evaluate and formulate:
- success criteria, solution specifications including task outlines, designs and test plans
- appropriate techniques within a specified solution.

Demonstrate the personal skills of cooperation and perseverance as well as appropriate technical skills for effective problem-solving in developing a specified product.

Assessment at a glance

Type of assessment	Format of assessment	Time (hours)	Weighting of final grade (%)
External			80
Paper 1	• Section A consists of several compulsory short answer questions. • Section B consists of five compulsory structured questions.	2 hours, 10 min.	40
Paper 2	An examination paper of between three and seven compulsory question; linked to the option studied.	1 hour, 20 min.	20
Paper 3	An examination paper consisting of four compulsory questions based on a pre-seen case study.	1 hour	20
Internal			20
Written commentary	A report of The development of a computational solution. Students must produce: • a cover page that follows the prescribed format • a product • supporting documentation (word limit 2,000 words).	30 hours	25
Group 4 project	To be assessed using the criterion Personal skills.	10 hours	

IV. Sample questions

- Draw the representation of the binary search tree if the following data were inserted in this order:
  - FALCON, CANARY, PIGEON, TURKEY, OSPREY.
- Discuss the methods used by criminals to hide or disguise certain files. For each method, identify the countermeasures that can be taken by a computer forensic scientist.

International Baccalaureate Diploma Programme Subject Brief

Sciences:

Computer science – Standard level

First assessments 2014

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

The IB DP Computer science SL course requires an understanding of the fundamental concepts of computational thinking as well as knowledge of how computers and other digital devices operate. The course, underpinned by conceptual thinking, draws on a wide spectrum of knowledge, and enables and empowers innovation, exploration and the acquisition of further knowledge. Students study how computer science interacts with and influences cultures, society and how individuals and societies behave, and the ethical issues involved. During the course the student will develop computational solutions. This will involve the ability to:

- identify a problem or unanswered question
- design, prototype and test a proposed solution
- liaise with clients to evaluate the success of the proposed solution and make recommendations for future developments.

The aims of the computer science standard level courses are to:

- provide opportunities for study and creativity within a global context that will stimulate and challenge students developing the skills necessary for independent and lifelong learning
- provide a body of knowledge, methods and techniques that characterize computer science
- enable students to apply and use a body of knowledge, methods and techniques that characterize computer science
- demonstrate initiative in applying thinking skills critically to identify and resolve complex problems
- engender an awareness of the need for, and the value of, effective collaboration and communication in resolving complex problems
- develop logical and critical thinking as well as experimental, investigative and problem-solving skills
- develop and apply the students' information and communication technology skills in the study of computer science to communicate information confidently and effectively
- raise awareness of the moral, ethical, social, economic and environmental implications of using science and technology
- develop an appreciation of the possibilities and limitations associated with continued developments in IT systems and computer science
- encourage an understanding of the relationships between scientific disciplines and the overarching nature of the scientific method.

II. Curriculum model overview

Component	Recommended teaching hours
Core syllabus content **SL/HL core** The topics that must be studied, including some practical work, are: • Topic 1: System fundamentals • Topic 2: Computer organization • Topic 3: Networks • Topic 4: Computational thinking, problem-solving and programming	80
Option **SL/HL core**	30
Internal assessment **Solution** • Practical application of skills through the development of a product and associated documentation	30
Group 4 project	10

III. Assessment model

Having followed the computer science standard level course, students will be expected to:

Know and understand:
- relevant facts and concepts
- appropriate methods and techniques
- computer science terminology
- methods of presenting information.

Apply and use:
- relevant facts and concepts
- relevant design methods and techniques
- terminology to communicate effectively
- appropriate communication methods to present information.

Construct, analyse, evaluate and formulate:
- success criteria, solution specifications including task outlines, designs and test plans
- appropriate techniques within a specified solution.

Demonstrate the personal skills of cooperation and perseverance as well as appropriate technical skills for effective problem-solving in developing a specified product.

Assessment at a glance

Type of assessment	Format of assessment	Time (hours)	Weighting of final grade (%)
External			70
Paper 1	• Section A consists of several compulsory short answer questions • Section B consists of three compulsory structured questions.	1.5	45
Paper 2	An examination paper of between two and five compulsory questions; linked to the option studied.	1	25
Internal			30
Solution	The development of a computational solution. Students must produce: • a cover page that follows the prescribed format • a product supporting documentation (word limit 2,000 words). There must be evidence of independent research and investigation for students to reach the top level.	30	
Group 4 project	To be assessed using the criterion Personal skills.	10	

IV. Sample questions

- The colour of a pixel can be stored as a 16-bit integer.
  (a) State how many different colours can be represented in a 16-bit integerfield.
  (b) State whether this storage system for colour values is digital or analog.
  (c) Outline one advantage and one disadvantage of using 32-bits per-pixel to store colours instead of 16-bits per-pixel.
- State the output of the following code fragment:
  double n= 1234.5678;
  double p = math.floor((n*100)/100); output (p);
  Recall that math.floor(3.7) produces the integer result 3.

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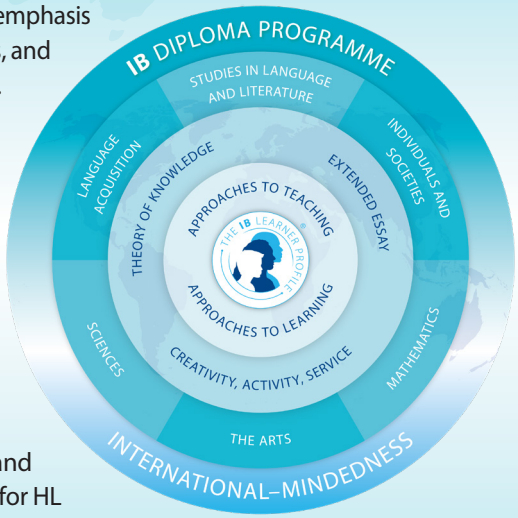
International Baccalaureate
Diploma Programme Subject Brief

Environmental systems and societies

First assessment 2026

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



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

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

I. Course description and aims

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

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

ESS aims to empower and equip students to:

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

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

II. Curriculum model overview

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

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

Students at SL and HL share the following:

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

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

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

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

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

Skills in the study of environmental systems and societies

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

Tools

- Experimental techniques
- Mathematics
- Technology
- Systems and models

Inquiry process

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

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

III. Assessment model

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

Assessment objective 1

Demonstrate knowledge and understanding of relevant:

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

Assessment objective 2

Apply this knowledge and understanding in the analysis of:

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

Assessment objective 3

Evaluate, justify, and synthesize, as appropriate:

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

Assessment objective 4

Investigate sustainability issues at the local or global level through:

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

Assessment at a glance

Type of assessment	Format of assessment	Time (hours)		Weighting of final grade %
		SL	HL	
External		**3.0**	**4.5**	**75 (SL)** **80 (HL)**
Paper 1	Students will be provided with data in a variety of forms relating to a specific, previously unseen case study. Questions will be based on the analysis and evaluation of the data in the case study. All questions are compulsory.	1.0	2.0	25 (SL) 30 (HL)
Paper 2	Section A is made up of short-answer and data-based questions. Section B requires students to answer structured essay questions. There is a limited amount of choice.	2.0	2.5	50 (SL/HL)

Internal		**10**	**25 (SL)** **20 (HL)**
Individual investigation	The individual investigation is an open-ended task in which the student gathers and analyses data to answer their own formulated research question. The outcome of the Individual investigation will be assessed through the form of a written report. The maximum overall word count for the report is 3,000 words.	10	25 (SL) 20 (HL)

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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.

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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

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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

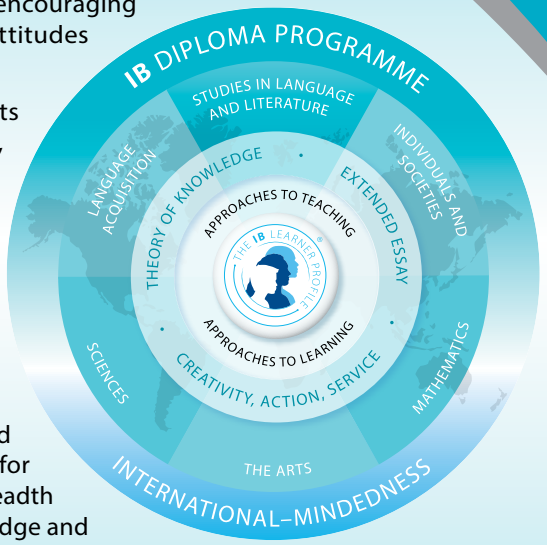
Type of assessment	Format of assessment	Time (hours)		Weighting of final grade (%)	
		SL	HL	SL	HL
External					
Paper 1	Technology allowed. Compulsory short-response questions based on the syllabus.	1.5	2	40	30
Paper 2	Technology allowed. Compulsory extended-response questions based on the syllabus.	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: Music

First assessment 2022

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

I. Course description and aims

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

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

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

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

Alignment with DP arts courses

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

Engagement with diverse musical material

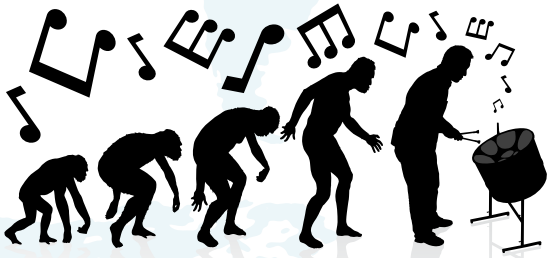
The new course seeks to be inclusive of students with wide-ranging personal and cultural musical backgrounds. In place of prescribed musical content, students and teachers in the new course have the agency to personalise unique approaches to musical forms, genres and pieces. The exploration of diverse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

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

A framework for study and assessment

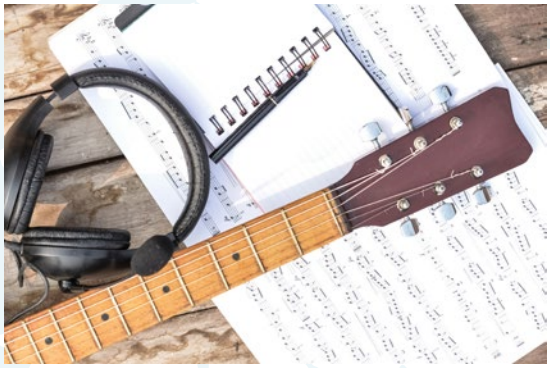
Engagement with these areas of inquiry takes place across three contexts—personal, local and global. These contexts invite students to move beyond familiar musical material (personal context), to experience music from the culture or community around them (local context), as well as engaging with previously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

What do students do in a music classroom?



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

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



Communicate and present music as researchers, creators and performers.

How are music students assessed?

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

An exploration portfolio: Written work demonstrating engagement with, and understanding of, diverse musical material, along with practical exercises in creating and performing

An experimentation report: Written work in the form of a rationale and commentary that supports practical musical evidence of experimentation in creating and performing

A musical presentation: Finished works in creating and performing, supported by programme notes.

In addition, HL students will submit the following project.

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

By the end of the course students will have:

- broadened their musical horizons through engagement with diverse musical material
- analysed a wide range of music
- engaged with music technology as a compulsory part of the course
- gained confidence in the essential processes associated with music-making
- developed as holistic musicians with experience as creators and performers

- developed both independent and collaborative working skills
- honed their inquiry, reflection and critical thinking skills.

The course is ideal for students who …

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

II. Curriculum model overview

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

III. Assessment model

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

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**.

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

The arts:

Visual arts—Higher level

First assessments 2016

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

International Baccalaureate Diploma Programme Subject Brief

The arts:

Visual arts—Standard level

First assessments 2016

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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 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 study visual arts in higher education as well as for those who are seeking lifelong enrichment through visual arts.

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

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

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

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

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

II. Curriculum model overview

Component	Recommended teaching hours
Visual arts in context • Examine and compare the work of artists from different cultural contexts. • Consider the contexts influencing their own work and the work of others. • Make art through a process of investigation, thinking critically and experimenting with techniques. • Apply identified techniques to their own developing work. • Develop an informed response to work and exhibitions they have seen and experienced. • Begin to formulate personal intentions for creating and displaying their own artworks.	**50**

Visual arts methods • Look at different techniques for making art. • Investigate and compare how and why different techniques have evolved and the processes involved. • Experiment with diverse media and explore techniques for making art. • Develop concepts through processes informed by skills, techniques and media. • Evaluate how their ongoing work communicates meaning and purpose. • Consider the nature of "exhibition" and think about the process of selection and the potential impact of their work on different audiences.	**50**
Communicating visual arts • Explore ways of communicating through visual and written means. • Make artistic choices about how to most effectively communicate knowledge and understanding. • Produce a body of artwork through a process of reflection and evaluation, showing a synthesis of skill, media and concept. • Select and present resolved works for exhibition. • Explain the ways in which the works are connected. • Discuss how artistic judgments impact the overall presentation.	**50**

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

III. Assessment model

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

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 assessment 2022

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

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

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

I. Course description and aims

The theory of knowledge (TOK) course plays a special role in the DP by providing an opportunity for students to reflect on the nature, scope and limitations of knowledge and the process of knowing. In this way, the main focus of TOK is not on students acquiring new knowledge but on helping students to reflect on, and put into perspective, what they already know. TOK underpins and helps to unite the subjects that students encounter in the rest of their DP studies. It engages students in explicit reflection on how knowledge is arrived at in different disciplines and areas of knowledge, on what these areas have in common and the differences between them.

The aims of the TOK course are:

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

II. Curriculum model overview

Course elements	Minimum teaching hours
Core theme: Knowledge and the knower This theme provides an opportunity for students to reflect on themselves as knowers and thinkers, and on the different communities of knowers to which we belong.	32
Optional themes Students are required to study **two** optional themes from the following five options. • Knowledge and technology • Knowledge and language • Knowledge and politics • Knowledge and religion • Knowledge and indigenous societies	
Areas of knowledge Students are required to study the following **five** areas of knowledge. • History • The human sciences • The natural sciences • The arts • Mathematics	50

III. Assessment model

Students are required to complete **two** assessment tasks for TOK.

- Theory of knowledge exhibition
- Theory of knowledge essay on a prescribed title

Assessment objectives

Having completed the TOK course, students should be able to:

- demonstrate TOK thinking through the critical examination of knowledge questions
- identify and explore links between knowledge questions and the world around us
- identify and explore links between knowledge questions and areas of knowledge
- develop relevant, clear and coherent arguments
- use examples and evidence effectively to support a discussion
- demonstrate awareness and evaluation of different points of view
- consider the implications of arguments and conclusions.

Assessment details

Type of assessment	Format of assessment	Hours	Weighting
External	Theory of knowledge essay	10	2/3 or 67%
Students are required to write an essay in response to one of the six prescribed titles that are issued by the IB for each examination session. As an external assessment component, it is marked by IB examiners.			
Internal	Theory of knowledge exhibition	8	1/3 or 33%
Students are required to create an exhibition of three objects with accompanying commentaries that explores how TOK manifests in the world around us. This component is internally assessed by the teacher and externally moderated by the IB at the end of the course.			

IV. Sample questions

Specimen essay titles

- How important are the opinions of experts in the search for knowledge? Answer with reference to the arts and one other area of knowledge.
- Is the division of the natural sciences and mathematics into separate areas of knowledge artificial?
- When historians and natural scientists say that they have explained something, are they using the word "explain" in the same way?
- Are there fewer ethical constraints on the pursuit of knowledge in the arts than in the human sciences?
- How do our expectations impact our interpretations? Discuss with reference to history and one other area of knowledge.
- To what extent do you agree with the claim that "knowledge is of no value unless you put it into practice" (Anton Chekhov)? Answer with reference to two areas of knowledge.

Sample exhibition prompts

- What counts as knowledge?
- On what grounds might we doubt a claim?
- Are some types of knowledge less open to interpretation than others?
- Is bias inevitable in the production of knowledge?
- Should some knowledge not be sought on ethical grounds?
- What role do experts play in influencing our consumption or acquisition of knowledge?
- How can we distinguish between knowledge, belief and opinion?

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