

# **TARSUS AMERICAN COLLEGE**

# 2023 - 2024

# **IB STUDENT HANDBOOK**



# NOVEMBER 25-10 IB



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# **IB Mission Statement**

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

To this end the 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.



# The IB Learner Profile

The aim of all IB programmes is to develop internationally minded people who, recognizing their common humanity and shared guardianship of the planet, help to create a better and more peaceful world.

IB learners strive to be:

### Inquirers

They develop their natural curiosity. They acquire the skills necessary to conduct inquiry and research and show independence in learning. They actively enjoy learning and this love of learning will be sustained throughout their lives.

### Knowledgeable

They explore concepts, ideas and issues that have local and global significance. In so doing, they acquire indepth knowledge and develop understanding across a broad and balanced range of disciplines.

### Thinkers

They exercise initiative in applying thinking skills critically and creatively to recognize and approach complex problems, and make reasoned, ethical decisions.

### Communicators

They understand and express ideas and information confidently and creatively in more than one language and in a variety of modes of communication. They work effectively and willingly in collaboration with others.

### Principled

They act with integrity and honesty, with a strong sense of fairness, justice and respect for the dignity of the individual, groups and communities. They take responsibility for their own actions and the consequences that accompany them.

### Open-minded

They understand and appreciate their own cultures and personal histories, and are open to the perspectives, values and traditions of other individuals and communities. They are accustomed to seeking and evaluating a range of points of **view and** are willing to grow from the experience.



# Caring

They show empathy, compassion and respect towards the needs and feelings of others. They have a personal commitment to service, and act to make a positive difference to the lives of others and to the environment.

## **Risk-takers**

They approach unfamiliar situations and uncertainty with courage and **forethought and** have the independence of spirit to explore new roles, ideas and strategies. They are brave and articulate in defending their beliefs.

### Balanced

They understand the importance of intellectual, physical and emotional balance to achieve personal wellbeing for themselves and others.

# Reflective

They give thoughtful consideration to their own learning and experience. They are able to assess and understand their strengths and limitations in order to support their learning and personal development.



# The Diploma Programme

The curriculum contains six subject groups together with a core made up of three separate parts. This is illustrated by a "a model composed of concentric circles with the IB Learner Profile at the center" with the three parts of the core at its center.



Candidates for the diploma study six subjects selected from the subject groups. Normally three subjects are studied at higher level (courses representing 240 teaching hours), and the remaining three subjects are studied at standard level (courses representing 150 teaching hours). All three parts of the core — extended essay, theory of knowledge and creativity, activity, service—are compulsory and are central to the philosophy of the Diploma Programme.

- The extended essay has a prescribed limit of 4,000 words. It offers the opportunity to investigate a topic of individual interest, and acquaints students with the independent research and writing skills expected at university.
- The interdisciplinary theory of knowledge (TOK) course is designed to provide coherence by exploring the nature of knowledge across disciplines, encouraging an appreciation of other cultural perspectives.
- Participation in the school's creativity, activity, service (CAS) programme encourages candidates to be involved in artistic pursuits, sports, and community service work. The programme fosters students' awareness and appreciation of life outside the academic arena.



All **higher-level** subjects, the core and at least one standard level subject must be taught over the two years of the programme. Up to two standard level subjects may be taught, should circumstances require, during the first year and assessed at the end of that first year as anticipated subjects. It is also permissible, should circumstances require, to teach one standard level subject during the first year and one standard level during the second year with assessment requirements met at the end of each corresponding year. It should be noted that this exception is designed to offer flexibility to schools where a genuine need for this arrangement exists due to unavoidable scheduling constraints. This is not intended to be a routine aspect of Diploma Programme design; all courses are designed as two year learning experiences. Languages ab initio and pilot subjects must be taught over the two years of the programme.

At the end of the two-year programme, candidates are assessed both internally and externally in ways that measure individual performance against stated objectives for each subject.

In nearly all subjects at least some of the assessment is carried out internally by teachers, who mark individual pieces of work produced as part of a course of study. Examples include oral exercises in language subjects, projects, student portfolios, class presentations, practical laboratory work, mathematical investigations, and artistic performances.

Some assessment tasks are conducted and overseen by teachers without the restrictions of examination **conditions but** are then marked externally by examiners. Examples include a variety of assessments.

Because of the greater degree of objectivity and reliability provided by the standard examination environment, externally marked examinations form the larger share of the assessment for most subjects.

The grading system is criterion-related (results are determined by performance against set standards, and not in relation to the performance of other students); validity, reliability and fairness are the watchwords of the Diploma Programme's assessment strategy.

In addition to completing the assessment requirements of six subjects, in order to be eligible for the award of the diploma a candidate must also meet the requirements of theory of knowledge, the extended essay and creativity, activity, service (CAS).

### GROUP 1

Language A: Literature SL-HL

### I. Course description and aims

The Diploma Programme (DP) is a rigorous pre-university course of study designed for students in the16 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

# 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.



# Curriculum model overview

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

# Assessment 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. Analyze 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) ghting of final grade (%)		nal	
		SL	HL	SL	HL
External					
Paper 1: Guided literary analysis	Guided analysis of unseen literary passages/ 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 responses in 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



# **GROUP 2**

Language B HL

This IB DP subject brief has four key components:

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

# 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.
- 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.



# 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.

# 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.



# II. Content outline

Theme	Guiding principle	Optional recommend	led 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 <b>do</b> globalization bring?



# Assessment at a glance

Language B HL asse	essment outline	Weighting
	Paper 1 (productive skills)	
	One writing task from a	25%
	choice of three	
External 75%	Writing—30 marks	
	Paper 2 (receptive skills)	
	Separate sections for	
	listening and reading	
	Listening—25 marks Reading—	250/
	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.



# **GROUP** 3

# Business Management HL

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,
- 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 **a 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 es- say, 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

Business management—higher level First assessments 2024 The Diploma Programme (DP) is a rigorous preuniversity 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),

### 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

Unit 1: Introduction to business management 20 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) Unit 2: Human resource management 35 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) Unit 3: Finance and accounts 45 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 appraisal3.9 Budgets (HL only)

	35
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)	
Unit 5: Operations management	45
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)	
	35
Business management toolkit	
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 analyze:

- 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 analyze business materials from a range of primary and secondary sources. Create well-structured materials using business management terminology.

### 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]

### Assessment at glance: Business HL

External		4 hours 30 minutes	80
Paper 1	Based on a pre-released statement that specifies the <i>context</i> and <i>background</i> 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

# Turkey in the 20th century SL Nature of the Subject

Turkey in the 20th Century, formerly known as Turkish Social Studies, is a school-based syllabus that was initially developed in 2000 by a team of teachers from various schools, as a multidisciplinary offering based on the requirements of the Turkish national curriculum for history, geography and sociology, and incorporating an international perspective. The purpose was to offer a means of including a nationally mandated requirement within the IB Diploma Programme for Turkish schools.

Turkey is located geographically at the junction of two continents, and culturally at the confluence of at least two great **civilizations**. This has influenced its history and culture as much as it has enabled it to influence her neighbors. The purpose of the subject is to explore this interchange of influences, using concepts and analytical frameworks from each of the separate disciplines required in the Turkish national curriculum. An international perspective is included to make students aware of the role that Turkey might play in the region, as well as of the perceptions of other societies about this country.

# Group 3 aims

The aims of all subjects in group 3, Individuals and Societies are to:

- 1. encourage the systematic and critical study **of** human experience and behaviour; physical, economic and social environments; the history and development of social and cultural institutions
- 2. develop in the student the capacity to identify, to analyse critically and to evaluate theories, concepts and arguments about the nature and activities of the individual and society
- 3. enable the student to collect, describe and analyse data used in studies of society, to test hypotheses and interpret complex data and source material
- 4. promote the appreciation of the way in which learning is relevant to both the culture in which the



student lives, and the culture of other societies

- 5. develop an awareness in the student that human attitudes and opinions are widely diverse and that a study of society requires an appreciation of such diversity
- 6. enable the student to recognize that the content and methodologies of the subjects in group 3 are contestable and that their study requires the toleration of uncertainty.

# Turkey in the 20th Century aims

### The aims of Turkey in the 20th Century are to:

- 1. Develop skills and knowledge that respond to the developing needs of the 21st century.
- 2. Provide a basic knowledge of the disciplines of history, geography and sociology in order to understand the political, social and cultural structure of Turkey in the 20th century.
- 3. Recognize the political, **economic**, and cultural impact of developments that occurred in Europe and the rest of the world on the history, geography and sociology of Turkey in the 20th century.
- 4. Develop an appreciation of historical, geographical and sociological inquiry from various perspectives.
- 5. Develop a deeper appreciation and sensitivity towards Turkish national culture and history through an understanding and respect for different cultures in Europe and the world.

### Objectives

By the end of the course, the student should be able to:

- 1. Demonstrate a sound knowledge of the historical, sociological and geographical developments that have occurred in Turkey since the nineteenth century.
- 2. Demonstrate an understanding of the international political, social and cultural influences on Turkey since the nineteenth century and the role of Turkey in world affairs in the twentieth century.
- 3. Critically appraise sources of information and evidence from a range of different disciplinary perspectives.
- 4. Employ concepts, terms and techniques, and use language appropriate to social enquiry, to analyse and evaluate social processes and historical events and trends.
- 5. Present clear, relevant and well-substantiated arguments about, and interpretations of, Turkish society, culture and politics.

### Syllabus outline: There are six topics

Topic 1: at the beginning of the 20th Century	
Topic 2: The foundations of the Turkish Republic 1923-1945	
Topic 3: The global changes between the world wars and their effects on Turkey	1918-1939
Topic 4: Turkey under pressure during World War II Topic 1: Turkey	
Topic 5: Reconstruction, democracy and developments in the region 1945-1985	
Topic 6: The effects of globalization and the dialogue with Europe 1985-2000	



# Total teaching hours: 150

Component	Weighting
External (2 hrs 30 mins) Exam 1 (1 hour)	75%
Four structured questions based on a topic in the syllabus (except unit 6). Topics change by year (24 points)	30%
Exam 2 (1 hour 30 minutes)	45%
Essay type questions based on five topics in the syllabus. Candidates respond to two questions. (30 points)	
Internal	25%
This component is assessed internally by the teacher and is moderated externally by the	
IB at the end of the course.	
Research Project (25 points)	

# Internal Assessment Details

**Research Project** 

Duration: 20 hrs

Weight: 25%

Wordlimit:Maximum2.200 Perfect grade:25

Assessment objectives: AO1, AO2, AO3, AO4

Students complete a research project in which they research a topic related to Turkey in the 20th Century. The subject can be expanded beyond the content and context in the curriculum and can cover countries other than Turkey which are taught in the course.

This component is evaluated internally by the teacher using the assessment criteria in this guide and moderated externally at the end of the course. Assessment objectives 1-4 apply to the research project. The research project consists of three sections:

### Figure 3 Research Project



Students can choose an independent topic for their research project and are encouraged to use their own initiative. Students should choose their topic with the guidance and approval of their teachers. Teachers should approve the topic and the research question before starting. It is extremely important that there are sufficient resources to support the research and that the research can be assessed by internal evaluation criteria. Teachers should also ensure that students are aware of relevant ethical considerations when conducting research, such as sensitivity or respecting confidentiality.

This research project is an opportunity for students to demonstrate how they apply their skills and knowledge to their chosen topic. Here the emphasis should be on a specific inquiry which enables the student to develop and apply the skills learned in the lesson by selecting and analyzing a range of source materials and considering



different perspectives. The activity requires students to seek, select, evaluate and use evidence to arrive at a conclusion that is consistent with the evidence and arguments presented.

# **GROUP** 4

# Physics HL

# 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 content110180A Space, time and motion Kinematics • Forces and momentum • Work, energy and power • Rigid body mechanics ••• Galilean and special relativity •••2742The particulate nature of matter Thermal energy transfers • Greenhouse effect • Gas laws • Thermodynamics ••• Current and circuits •2432Wave behaviour Simple harmonic motion •• Wave model • Wave phenomena •• Standing waves and resonance • Doppler effect ••1729Fields Gravitational fields •• Heltorin in electromagnetic fields ••1938						
A Space, time and motion Kinematics • Forces and momentum • Work, energy and power • Rigid body mechanics ••• Gallean and special relativity •••2742The particulate nature of matter Thermal energy transfers • Greenhouse effect • Gas laws • Thermodynamics ••• Current and circuits •2432Wave behaviour Simple harmonic motion •• Wave model • Wave phenomena •• Standing waves and resonance • Doppler effect •• Doppler effect ••1729Fields Gravitational fields •• Effectric and magnetic fields •• Induction •••1938Nuclear and quantum physics Structure of the atom •• Quantum physics ••• Radioactive decay •• Fusion • Fusion and stars •2339Nuclear and quantum physics Practical work Collaborative sciences project Scientific investigation4060Practical work Collaborative sciences project Scientific investigation2040	Syllabus component		SI		HL	
Kinematics • Forces and momentum • Work, energy and power • Rigid body mechanics ••• Galilean and special relativity •••Image: Constraint of the special relativity •••The particulate nature of matter Thermal energy transfers • Greenhouse effect • Gas laws • Thermodynamics ••• Current and circuits •2432Wave behaviour Simple harmonic motion •• Wave model • Wave model • Wave phenomena •• Standing waves and resonance • Doppler effect ••1729Fields Gravitational fields •• Electric and magnetic fields • Motion in electromagnetic fields • Motion mether ••1938Nuclear and quantum physics Structure of the atom •• Quantum physics ••• Radioactive decay •• Fission • Fusion and stars •2339Structure of the atom •• Quantum physics ••• Fission • Fusion and stars •4060Practical work Collaborative sciences project Scientific investigation2040	Syllabus content		11	0	180	
Thermal energy transfers • Greenhouse effect • Gas laws • Thermodynamics •••• Current and circuits •Image: Constraint of the second seco	A Space, time and motion Kinematics • Forces and momentum • Work, energy and power • Rigid body mechanics ••• Galilean and special relativity •••		27	7	42	
Simple harmonic motion ••   Wave model •   Wave phenomena ••   Standing waves and resonance •   Doppler effect ••   Fields   Gravitational fields ••   Electric and magnetic fields ••   Motion in electromagnetic fields •   Motion and stars •   Structure of the atom ••   Quantum physics •••   Radioactive decay ••   Fission •   Fusion and stars •   Experimental programme   40   Practical work   Collaborative sciences project Scientific investigation	Greenhouse effect • Gas laws • Thermodynamics •••		24	1	32	
Gravitational fields ••Electric and magnetic fields ••Motion in electromagnetic fields •Induction •••Nuclear and quantum physics Structure of the atom •• Quantum physics ••• Radioactive decay •• Fission • Fusion and stars •Experimental programme40Practical work Collaborative sciences project Scientific investigation	Wave model • Wave phenomena •• Standing waves and resonance	e•	17	7	29	
Structure of the atom •• Quantum physics ••• Radioactive decay •• Fission • Fusion and stars •Here Fission • Fusion and stars •Here Fission • Fusion and stars •Experimental programme4060Practical work Collaborative sciences project Scientific investigation1010	Fields Gravitational fields •• Electric and magnetic fields •• Motion in electromagnetic fields • Induction •••		19	)	38	
Practical work2040Collaborative sciences project Scientific investigation1010	Structure of the atom •• Quantum physics ••• Radioactive decay •• Fission •			23		39
Practical work2040Collaborative sciences project Scientific investigation1010	Experimental programme			40		60
		Scientific investigation		10		10

# The group 4 project

The group 4 project is a collaborative activity where students from different group 4 subjects, within or between schools, work together. It allows for concepts and perceptions from across disciplines to be shared while appreciating the environmental, social and ethical implications of science and technology. It can be practically



or theoretically based and aims to develop an understanding of the relationships between scientific disciplines and their influence on other areas of knowledge. The emphasis is on interdisciplinary cooperation and the scientific processes.

## I. 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.

		Time (hours)		Weighting	
Type of assessment	Format of assessment	SL	HL	of final grade	
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	

### Assessment at a glance



Chemistry SL

# 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.

	Recommended teaching hours	
Syllabus component	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?	24	45
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		
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.

# 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

Analyze, 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

				Weighting of	
Type of assessment	Format of assessment	SL	HL	final grade	
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 analyzes 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	

# **Biology HL**

# 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 analyze, 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.

### 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.

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



SLHLForm and function2639• Carbohydrates and lipidsProteins2639• Membranes and membrane transportOrganelles and compartmentalization2639• Organelles and compartmentalizationCell specialization4848• Gas exchange1148• Transport13148• Muscle and motility *3148• Adaptation to environment3148• Ecological niches3148• Cell respiration9148• Cell respiration148• Cell respiration6060• Droteins and communities3460• Transfer of energy and matter3460• Doto synthesis3460• DNA replication3460• Protein synthesis3460• Mutations and gene editing26 and nuclear division• Gene expression *3460• Water potential84• Reproduction11• Inheritance11• Homeostasis11• Natural selection51• Natural selection560• Sustainability and change4060	0.11.1	Recommended teaching hours		
<ul> <li>Carbohydrates and lipids</li> <li>Proteins</li> <li>Membranes and membrane transport</li> <li>Organelles and compartmentalization</li> <li>Cell specialization</li> <li>Gas exchange</li> <li>Transport</li> <li>Muscle and motility *</li> <li>Adaptation to environment</li> <li>Ecological niches</li> <li>Interaction and interdependance</li> <li>Cell respiration</li> <li>Photosynthesis</li> <li>Chemical signalling *</li> <li>Neural signalling *</li> <li>Neural signalling *</li> <li>Populations and communities</li> <li>Transfer of energy and matter</li> <li>Continuity and change</li> <li>Cell and nuclear division</li> <li>Gene expression *</li> <li>Water potential</li> <li>Resproduction</li> <li>Sustainability and change</li> <li>Natural selection</li> <li>Sustainability and change</li> <li>Colimate change</li> <li>Kapterimental programme</li> <li>Kapterimental programme</li> </ul>	Syllabus component	SL	HL	
<ul> <li>Enzymes and metabolism</li> <li>Cell respiration</li> <li>Photosynthesis</li> <li>Chemical signalling *</li> <li>Neural signalling</li> <li>Integration of body systems</li> <li>Defence against disease</li> <li>Populations and communities</li> <li>Transfer of energy and matter</li> <li>Continuity and change</li> <li>Cell and nuclear division</li> <li>Gene expression *</li> <li>Water potential</li> <li>Reproduction</li> <li>Inheritance</li> <li>Homeostasis</li> <li>Natural selection</li> <li>Sustainability and change</li> <li>Climate change</li> <li>Experimental programme</li> <li>40</li> </ul>	<ul> <li>Carbohydrates and lipids</li> <li>Proteins</li> <li>Membranes and membrane transport</li> <li>Organelles and compartmentalization</li> <li>Cell specialization</li> <li>Gas exchange</li> <li>Transport</li> <li>Muscle and motility *</li> <li>Adaptation to environment</li> </ul>	26	39	
<ul> <li>DNA replication</li> <li>Protein synthesis</li> <li>Mutations and gene editing</li> <li>Cell and nuclear division</li> <li>Gene expression *</li> <li>Water potential</li> <li>Reproduction</li> <li>Inheritance</li> <li>Homeostasis</li> <li>Natural selection</li> <li>Sustainability and change</li> <li>Climate change</li> <li>Experimental programme</li> <li>40</li> </ul>	<ul> <li>Enzymes and metabolism</li> <li>Cell respiration</li> <li>Photosynthesis</li> <li>Chemical signalling *</li> <li>Neural signalling</li> <li>Integration of body systems</li> <li>Defence against disease</li> <li>Populations and communities</li> </ul>	31	48	
	<ul> <li>Continuity and change</li> <li>DNA replication</li> <li>Protein synthesis</li> <li>Mutations and gene editing</li> <li>Cell and nuclear division</li> <li>Gene expression *</li> <li>Water potential</li> <li>Reproduction</li> <li>Inheritance</li> <li>Homeostasis</li> <li>Natural selection</li> <li>Sustainability and change</li> </ul>	34	60	
Practical work2040Collaborative sciences project Scientific investigation1010101010	Experimental programme Practical work	20 10	40 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.

### 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.

		Time (hours)		Weighting of
Type of assessment	Format of assessment	SL	HL	final grade
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

Assessment at a glance

# Environmental System and Societies-SL I. Course description and aims:

Environmental systems and societies (ESS) are an interdisciplinary course offered only at standard level (SL). This course can fulfill either the individuals and societies or the sciences requirement. Alternatively, this course enables students to satisfy the requirements of both subjects' groups simultaneously while studying one course. ESS is firmly grounded in both a scientific exploration of environmental systems in their structure and function, and in the exploration of cultural, economic, ethical, political, and social interactions of societies with the environment. As a result of studying this course, students will become equipped with the ability to recognize and evaluate the impact of our complex system of societies on the natural world. The interdisciplinary nature of the DP course requires a broad skill set from students, including the ability to perform research and investigations, participation in philosophical discussion and problem-solving. The course requires a systems approach to environmental understanding and promotes holistic thinking about environmental issues. Teachers explicitly teach thinking and research skills such as comprehension, text analysis, knowledge transfer and use of primary sources. They encourage students to develop solutions at the personal, community and global levels.

The aims of the DP environmental systems and societies course are to enable students to:

- acquire the knowledge and understandings of environmental systems and issues at a variety of scales
- apply the knowledge, methodologies and skills to analyse environmental systems and issues at a variety of scales
- · appreciate the dynamic interconnectedness between environmental systems and societies
- value the combination of personal, local and global perspectives in making informed decisions and taking responsible actions on environmental issues
- be critically aware that resources are finite, that these could be inequitably distributed and exploited, and that management of these inequities is the key to sustainability
- develop awareness of the diversity of environmental value systems
- develop critical awareness that environmental problems are caused and solved by decisions made by individuals and societies that are based on different areas of knowledge
- engage with the controversies that surround a variety of environmental issues
- create innovative solutions to environmental issues by engaging actively in local and global contexts.



## Curriculum model overview

Component	Recommended teaching hours
Core content	120
1. Foundations of environmental systems and societies	16
2. Ecosystems and ecology	25
3. Biodiversity and conservation	13
4. Water and aquatic food production systems and societies	15
5. Soil systems and terrestrial food production systems and societies	12
6. Atmospheric systems and societies	10
7. Climate change and energy production	13
8. Human systems and resource use	16
Practical scheme of work	30
Practical activities	20
Individual investigation	10

# The group 4 project

ESS students have the option to participate in the group 4 project. For those who participate, 10 hours of practical activities will be replaced with 10 hours of work on the group 4 project.

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

### Assessment model

There are four assessment objectives for the DP environmental systems and societies course. Having followed the course at SL, students will be expected to do the following.

### Assessment objective 1

Demonstrate knowledge and understanding of relevant:

- facts and concepts
- methodologies and techniques
- values and attitudes.

### Assessment objective 2

Apply this knowledge and understanding in the analysis of:

- explanations, concepts, and theories
- data and models
- case studies in unfamiliar contexts
- arguments and value systems.

### Assessment objective 3

Evaluate, justify, and synthesize, as appropriate:

- explanations, theories, and models
- arguments and proposed solutions
- methods of fieldwork and investigation
- cultural viewpoints and value systems.



### Assessment objective 4

Engage with investigations of environmental and societal issues at the local and global level through:

- evaluating the political, economic and social contexts of issues
- selecting and applying the appropriate research and practical skills necessary to carry out investigations
- suggesting collaborative and innovative solutions that demonstrate awareness and respect for the cultural differences and value systems of others.

### Assessment at a glance

Type of assessment	Format of assessment	Time (hours)	Weighting of final grade (%)
External		3	75
Paper 1	Case study	1	25
Paper 2	Short answers and structured essays	2	50
Internal			
Individual investigation	Written report of a research question designed and implemented by the student.	10	25

# GROUP 5 – Math Analysis and Approaches SL-HL

### 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 recognize 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 allow s 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 instill 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, inter- national and historical perspectives
- appreciate the contribution of mathematics to other disciplines, and as a particular "area of knowledge" in the TOK course
- develop the ability to reflect critically upon their own work and the work of others
- independently and collaboratively extend their understanding of mathematics.

# Curriculum model overview

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

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

### 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

Format of assessment	Time (hours)		Weighting of l grade (%)	
	SL	HL	SL	HL
No technology allowed.	1.5	2	40	30
Section A: compulsory short- response questions based on the syllabus.				
Section B: compulsory extended- response questions based on the syllabus.				
Technology allowed.	1.5	2	40	30
Section A: compulsory short- response questions based on the syllabus.				
Section B: compulsory extended- response questions based on the syllabus.				
Technology allowed. Two compulsories extended- response problem-solving questions.		1		20
	15	15	20	20
	<ul> <li>No technology allowed.</li> <li>Section A: compulsory short-response questions based on the syllabus.</li> <li>Section B: compulsory extended-response questions based on the syllabus.</li> <li>Technology allowed.</li> <li>Section A: compulsory short-response questions based on the syllabus.</li> <li>Section A: compulsory short-response questions based on the syllabus.</li> <li>Section B: compulsory extended-response questions based on the syllabus.</li> <li>Technology allowed.</li> <li>Section B: compulsory extended-response questions based on the syllabus.</li> <li>Technology allowed.</li> <li>Technology allowed.</li> <li>Technology allowed.</li> </ul>	Format of assessmentSLSLSLNo technology allowed.1.5Section A: compulsory short- response questions based on the syllabus.1.5Section B: compulsory extended- response questions based on the syllabus.1.5Technology allowed.1.5Section A: compulsory short- response questions based on the syllabus.1.5Section A: compulsory short- response questions based on the syllabus.1.5Section B: compulsory extended- response questions based on the syllabus.1.5Section B: compulsory extended- response questions based on the syllabus.1.5Technology allowed.1.5Technology allowed.1.5Technology allowed.1.5Two compulsories extended- response1.5	Format of assessmentSLHLNo technology allowed.1.52Section A: compulsory short- response questions based on the syllabus.1.52Section B: compulsory extended- response questions based on the syllabus.1.52Technology allowed.1.52Section A: compulsory short- response questions based on the syllabus.1.52Section A: compulsory short- response questions based on the syllabus.1.52Section B: compulsory extended- response questions based on the syllabus.1.51Technology allowed.1.51Technology allowed.11Tow compulsories extended- response problem-solving questions.1	Format of assessmentI grade (%)SLHLSLNo technology allowed.1.52Section A: compulsory short- response questions based on the syllabus.1.52Section B: compulsory extended- response questions based on the syllabus.1.52Technology allowed.1.5240Section A: compulsory extended- response questions based on the syllabus.1.52Technology allowed.1.5240Section A: compulsory short- response questions based on the syllabus.1.52Section B: compulsory extended- response questions based on the syllabus.1.52Technology allowed.1.511Technology allowed.1.511Two compulsories extended- response problem-solving questions.11

## CORE:

TOK

The Diploma Programme (DP) is a rigorous pre-university course of study designed for students in the16 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 area's 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.

# 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 intercultural understanding
- to encourage students to make connections between academic disciplines by exploring underlying concepts and by identifying similarities and differences in the methods of inquiry used in different areas of knowledge
- to prompt students to consider the importance of values, responsibilities and ethical concerns relating to the production, acquisition, application and communication of knowledge.

## Curriculum model overview

Course elements	Minimum teaching hours
Core theme: Knowledge and the knower	32
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.	
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

# 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%
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Students are required to create an exhibition of three objects with accompanying commentaries that explore 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.

## 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

50



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?

## EXTENDED ESSAY

A diploma candidate must complete and submit an extended essay, which is a substantial piece of independent research of up to 4,000 words. Work on the extended essay is expected to occupy approximately 40 hours. The work for an extended essay must be done under the direct supervision of an appropriate teacher at the IB World School that is registering the candidate for the examination session.

## Nature of the extended essay

The extended essay is an in-depth study of a focused topic chosen from the list of approved Diploma Programme subjects—normally one of the student's six chosen subjects for the IB diploma. It is intended to promote high-level research and writing skills, intellectual discovery and creativity. It provides students with an opportunity to engage in personal research in a topic of their own choice, under the guidance of a supervisor (a teacher in the school). This leads to a major piece of formally presented, structured writing, in which ideas and findings are communicated in a reasoned and coherent manner, appropriate to the subject chosen. It is recommended that completion of the written essay is followed by a short, concluding interview, or viva voce, with the supervisor.

The extended essay is assessed against common criteria, interpreted in ways appropriate to each subject.

The extended essay is:

- compulsory for all Diploma Programme students
- externally assessed and, in combination with the grade for theory of knowledge, contributes up to three points to the total score for the IB diploma
- a piece of independent research/investigation on a topic chosen by the student in cooperation with a supervisor in the school
- chosen from the list of approved Diploma Programme subjects, published in the

Handbook of procedures for the Diploma Programme

- presented as a formal piece of scholarship containing no more than 4,000 words
- the result of approximately 40 hours of work by the student
- concluded with a short interview, or viva voce, with the supervising teacher (recommended)

In the Diploma Programme, the extended essay is the prime example of a piece of work where the student has the opportunity to show knowledge, understanding and enthusiasm about a topic of his or her choice. In those countries where it is the norm for interviews to be required prior to acceptance for employment or for a place at university, the extended essay has often proved to be a valuable stimulus for discussion.



#### Assessment objectives

In working on the extended essay, students are expected to:

- 1. plan and pursue a research project with intellectual initiative and insight
- 2. formulate a precise research question
- 3. gather and interpret material from sources appropriate to the research question
- 4. structure a reasoned argument in response to the research question on the basis of the material gathered
- 5. present their extended essay in a format appropriate to the subject, acknowledging sources in one of the established academic ways
- 6. use the terminology and language appropriate to the subject with skill and understanding
- 7. apply analytical and evaluative skills appropriate to the subject, with an understanding of the implications and the context of their research.

Note: "material" has different meanings in different subjects. It may be data or information; it may be arguments or evidence.

# CAS (Creativity, Activity, Service)

A diploma candidate must engage in a programme of extra-curricular activities known as creativity, activity, service. Schools entering candidates for the diploma undertake to ensure that three to four hours each week are available to all candidates for CAS activities. A minimum of 150 hours during the two years of the Diploma Programme is required.

## The nature of creativity, activity, service

## if you believe in something, you must not just think or talk or write, but must act.

## Peterson (2003)

Creativity, activity, service (CAS) is at the heart of the Diploma Programme. It is one of the three essential elements in every student's Diploma Programme experience. It involves students in a range of activities alongside their academic studies throughout the Diploma Programme. The three strands of CAS, which are often interwoven with particular activities, are characterized 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 enables students to enhance their personal and interpersonal development. A meaningful CAS programme is a journey of discovery of self and others. For many, CAS is profound and life - changing. Each individual student has a different starting point and different needs and goals. A CAS programme is, therefore, individualized according to student interests, skills, values and background.

Successful completion of CAS is a requirement for the award of the IB Diploma. While not formally assessed, students reflect on their CAS experiences and provide evidence in their CAS portfolios of achieving the seven learning outcomes

The CAS programme 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.



# CAS Experience

A CAS experience is a specific event in which the student engages with one or more of the three CAS strands

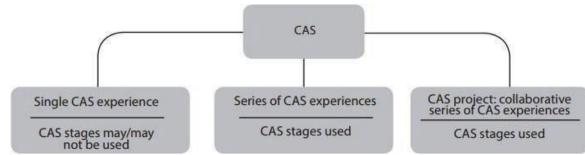


## Figure 1 - CAS experiences

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 unplanned/singular experiences. A series of planned CAS experiences are recommended for a more engaging CAS programme. CAS experiences may incorporate one or more of the CAS strands.

For example:

- Going for a mountain hike could be a singular experience within the "Activity" strand. A student plans a number of visits to a nursing home resulting in a series of CAS experiences within the "Service" strand.
- A group of students plan and stage a basketball tournament for the local community, resulting in a series of CAS experiences involving the strands of "Activity" and "Service".







## Learning outcomes

LO 1	Identify own strengths and develop areas for growth
Descriptor	Students are able to see themselves as individuals with various abilities and skills, of which some are more developed than others.
LO 2	Demonstrate that challenges have been undertaken, developing new skills in the process
Descriptor	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 experiences that the student has not previously undertaken or through increased expertise in an established area.
LO 3	Demonstrate how to initiate and plan a CAS experience
Descriptor	Students can articulate the stages from conceiving an idea to executing a plan for a CAS experience or series of CAS experiences. This may be accomplished in collaboration with other participants. Students may show their knowledge and awareness by building on a previous experience, or by launching a new idea or process.
LO 4	Show commitment to and perseverance in CAS experiences
Descriptor	Students demonstrate regular involvement and active engagement in CAS.
LO 5	Demonstrate the skills and recognize the benefits of working collaboratively
Descriptor	Students are able to identify, demonstrate and critically discuss the benefits and challenges of collaboration gained through CAS experiences.
LO 6	Demonstrate engagement with issues of global significance
Descriptor	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.
LO 7	Recognize and consider the ethics of choices and actions
Descriptor	Students show awareness of the consequences of choices and actions in planning and carrying out CAS experiences.

# Responsibilities of the student

Key to a student's CAS programme is personal engagement, choice and enjoyment of CAS experiences. Throughout the Diploma Programme students undertake a variety of CAS experiences, ideally on a weekly basis, for a minimum of 18 months. They must also undertake at least one CAS project with a minimum duration of one month. Students reflect on CAS experiences at significant moments throughout CAS and maintain a CAS portfolio. Using evidence from their CAS portfolio, students will demonstrate the achievement of the seven CAS learning outcomes to the CAS coordinator's satisfaction.



CAS students are expected to:

- approach CAS with a proactive attitude
- develop a clear understanding of CAS expectations and the purpose of CAS
- explore personal values, attitudes, and attributes with reference to the IB learner profile and the

## IB mission statement

- determine personal goals
- · discuss plans for CAS experiences with the CAS coordinator and/or CAS adviser
- understand and apply the CAS stages where appropriate
- take part in a variety of experiences, some of which are self-initiated, and at least one CAS project
- become more aware of personal interests, skills and talents and observe how these evolve throughout the CAS programme
- maintain a CAS portfolio and keep records of CAS experiences including evidence of achievement of the seven CAS learning outcomes
- understand the reflection process and identify suitable opportunities to reflect on CAS experiences
- · demonstrate accomplishments within their CAS programme
- communicate with the CAS coordinator/adviser and/or CAS supervisor in formal and informal meetings
- ensure a suitable balance between creativity, activity and service in their CAS programme
- behave appropriately and ethically in their choices and behaviours.

# Reflection:

Being reflective is one attribute of the IB learner profile: "We thoughtfully consider the world and our own ideas and experience. We work to understand our strengths and weaknesses in order to support our learning and personal development." Reflection is central to building a deep and rich experience in CAS. Developing a culture of reflection helps students recognize and understand how to be reflective as well as deciding the best methods and appropriate timing. Student learning is enhanced by reflection on choices and actions. This enables students to grow in their ability to explore skills, strengths, limitations and areas for further development. Through reflection students examine ideas and consider how they might use prior learning in new contexts.

Reflection leads to improved problem-solving, higher cognitive processes and greater depth of understanding in addition to exploring how CAS experiences may influence future possibilities. The thinking skills category of the approaches to learning in the Diploma Programme highlights the need to explicitly teach students to reflect in different situations. For reflection in CAS to be meaningful, schools must plan how to engage students in reflection as a learned process. The development of reflective skills is best when explicitly taught across the curriculum, leading students to reflect independently as a valued process.

The overarching intention of reflection in CAS includes the opportunity for students to:

- deepen learning consider relevance of experience
- explore personal and group values recognize the application of knowledge, skills, and attributes
- identify strengths and areas for development
- gain a greater understanding of self and others
- place experience in a larger context
- generate relevant ideas and questions
- consider improvements in individual and collective choices and actions
- transfer prior learning to new situations
- generate and receive constructive feedback
- develop the ongoing habit of thoughtful, reflective practice



# Forms of reflection

During CAS, the form of reflection must take into account student choice. When overly prescribed, students may perceive the act of reflection as a requirement to fulfill another's expectations. Students may then aim to complete "a reflection" quickly since the value is unrealized. By contrast, the student who understands the purpose and process of reflection would choose the appropriate moment, select the method, and decide on the amount of time needed. With this greater sense of autonomy and responsibility, the student may be encouraged to be more honest, forthcoming, and expressive, and develop insights including those related to the learning outcomes. The ultimate intention is for students to be independently reflective. Reflection can appear in countless forms. CAS students should be able to identify forms of expression that have personal meaning and best enable them to explore their experiences.

For example:

- A student might take photographs while hiking and use these to reflect in writing.
- Two students could compose a song describing how they helped children.
- A student might dramatize a poem to capture a feeling of creative endeavour.
- A student could produce a short video summarizing a CAS experience.
- A group of students create a poster highlighting aspects of a shared experience.

By encouraging students to choose forms of reflection that are personal and enjoyable, reflection becomes a means for self-discovery. Students make connections, develop awareness of choices and consequences, and acquire sensitivity to the experiences of self and others. Student reflection may be expressed through a paragraph, a dialogue, a poem, a comic strip, a dramatic performance, a letter, a photograph, a dance, or other forms of expression. Students find greater value and purpose when they apply their own interests, skills and talents when reflecting. They discover that reflection can be internal and private or external and shared. It is possible students may wish to keep private certain reflections. As such, it is recommended that students decide which reflections will be placed in their CAS portfolio. Students should include reflections in their CAS portfolio that give evidence to achieving each of the seven CAS learning outcomes.

## Understanding reflection

One way to explain reflection is to clarify what reflection is and what it is not. A helpful way to initiate discussion of the reflective process is for students to collaborate with their peers and draw up their own comparison table. This chart shows examples of what students may list and discuss.

Ref	lection is:	Ref	ection is not:
•	honest	•	forced
•	personal	•	right or wrong
•	done in many different ways	•	good or bad
•	sometimes difficult	•	marked or graded
•	sometimes easy	•	difficult
•	sometimes creative	•	copying what someone else said
•	building self-awareness	•	predictable
•	necessary for learning	•	to be judged by others
•	what I did, combined with how I felt	•	only a summary of what happened
•	surprising	•	done to please someone else
•	helpful for planning	•	a waste of time
•	done alone or with others	•	only written
•	about thoughts, feelings, and ideas	•	only discussion
•	adding perspective.	·	only led by teachers.



## CAS Portfolio:

All CAS students are expected to maintain and complete a CAS portfolio as evidence of their engagement with CAS and achievement of the seven CAS learning outcomes. The CAS portfolio can also reveal how students have developed the attributes of the IB learner profile. The CAS portfolio is used by students to plan their CAS programme, reflect on their CAS experiences, and gather evidence of involvement in CAS; it is not formally assessed. The CAS coordinator/adviser must ensure the students keep their CAS portfolio up-to-date and relevant as it is a summation of their CAS programme. It could also be a valuable addition to a student's resume for a prospective employer or educational institution. During the three scheduled CAS interviews the CAS portfolio is discussed and appropriate encouragement and advice is given. Notes and recommendations from these consultations should be briefly documented and included in the student's CAS portfolio. If any concerns arise, especially on whether a student will successfully complete CAS, these should be noted in the CAS portfolio and appropriate action taken at the earliest opportunity. The CAS coordinator/adviser checks the CAS portfolio regularly. The CAS portfolio is used to showcase the student's CAS programme and should be a source of pride for the student. To highlight its significance, students could have the choice of how the CAS portfolio is assembled, what they include and how it is shared. Individual student learning styles will dictate the type of portfolio that they use: digital, online, diary, journal, scrapbook, or a blended approach. Students are encouraged to explore the different options available to them. While the IB does not require any particular format for the CAS portfolio, a three-part portfolio may appeal to students and CAS coordinators and could include the following sections: "Profile", "Experiences", and "Evidence". Each section would be intended to assist students to better understand their engagement with CAS, reflect on their experiences, and provide evidence of their experiences.

Iborganization. "Course Selection Guidance." International Baccalaureate®, https://www.ibo.org/university-admission/support-students-transition-to-higher-education/course-selection-guidance/.



## VIOLATIONS OF ACADEMIC HONESTY

(In Written Assignments, Exams, Projects, Experiments and Reports, Schoolwork)

- 1. Plagiarism: This is generally defined as the representation, intentional or unintentional, of the ideas or work of another person as the candidate's own. It may be further categorized as follows:
  - a. Intentional plagiarism: copying someone else's work, buying or borrowing papers, cutting and pasting blocks of text from electronic sources without documenting, media "borrowing" without documentation, publishing without permissions of creators, and failure of the student to use his/her own "voice"
  - b. Unintentional plagiarism: careless paraphrasing, poor documentation, quoting excessively.
- 2. Cheating: Any attempt or action towards secretly using unauthorized resources for answering questions during the exam constitutes cheating.
- **3.** Presenting or submitting the complete or a part of the same work, assignment or project completed previously or for another purpose in different courses without citing the source
- 4. Providing a bibliography of sources which do not exist or developing a fictitious set of data.
- 5. Doing academic work on behalf of another student and getting someone else to do their work.
- 6. Action which seeks to gain an unfair advantage (obtaining a doctor's note although the student is not really ill, providing a false excuse in order to receive an extension or a make-up assignment, etc.)
- 7. Issuing and using falsified documentation (reference letter, health report, qualification/points, transcript of records).
- 8. Disrupting the work environment for another person.
- 9. Disrupting, damaging or destroying someone else's work.
- 10. Using online resources and social network tools inappropriately,
- 11. Helping another person to commit any of the acts explained above, or planning such acts
- 12. Not disclosing the identity of the person committing these acts

\*Any other behavior that gains an unfair advantage for a student or that affects the results of another student (for example, taking unauthorized material into an examination room, misconduct during an examination) and the rules to be followed during an exam are included in the TAC Exam Regulations.



#### Academic Committee

The main purpose of this committee is to promote academic honesty and ethical behavior in the school by using a constructive, positive and solution-oriented approach.

- The committee is made up of the school principal, a guidance counselor, a student representative, an assistant principal, an IT staff member and three subject teachers.
- The committee organizes training about academic honesty at the beginning of the year, and ensures student participation. These trainings are planned during the previous year.
- At the end of the training, the students are presented with certificates, as well as an Ethical Behavior Contract to sign.
- Newly enrolled students are their parents sign the Academic Honesty Contract.

#### Tools Used in the School

- Turnitin online system is used in the school to help prevent cases of academic dishonesty/plagiarism. Certain assignments and projects are assigned via Turnitin to promote a more conscientious use of resources by students. <u>http://turnitin.com.tr</u>
  - During the Turnitin check, assignments are compared with other assignments in the database, on the Internet, and other resources. All submitted assignments then become part of the "turnitin" database.
  - Students and parents agree that all submitted assignments will be added to the "turnitin" database in order to prevent plagiarism.
  - Our students are required to use their school addresses when signing up on the turnitin system.
  - The citation format in use at Tarsus American College is MLA. For more information about this citation format: <u>http://owl.english.purdue.edu</u>.
  - o <u>https://eur03.safelinks.protection.outlook.com</u>
- The citation format in use at Tarsus American College is MLA. For more information about this citation format: <u>http://owl.english.purdue.edu</u>.

# RESPONSIBILITIES

## Responsibilities of a Tarsus American College Student

- Internalize and implement the principles outlined in the AHP.
- Keep up to date with the school calendar and important dates, such as term project process and submission dates.
- In cases of a suspected violation of the AHP, be responsible for proving that all components of the work are genuine and represent their best effort
- Carefully implement correct referencing and citation methods
- Support the academic honesty process by maintaining an ethical approach.

## Rights of a Tarsus American College Student



- To understand clear expectations through the "Academic Honesty Policy of Tarsus American College" and see examples of genuine work
- To receive information about this policy at every grade level at the beginning of each academic year. At the start of the IB programme, to be subject to a detailed academic honesty training by the IB Coordinator and librarian.
- To be given a warning and subsequent guidance about a potential breach of the rules (citation, expression, etc.) by the subject teacher.
- To see the evidence of any alleged misconduct.
- To be informed by the subject teacher how the misconduct will be investigated and of the potential outcome of any such investigation. (For students in the IB programme, this process is followed up by advisors).
- To be provided with the "acceptable use of citation methods".
- To be provided with training about the acceptable use of citation methods and the acceptable use of resources by the school librarian in the Prep year. Students in other grade levels are supported about accessing information and use of resources during the year.

# Responsibilities of a Tarsus American College Teacher

- To make sure that the level of the work assigned is appropriate for the student and supports their academic development.
- To review the "Procedure for Written Exams" document to students before the exam and go over each item

(Please see Appendix 11).

- Course teachers are the best people to know the authenticity of student work, therefore, to judge whether the work submitted for assessment is the student's genuine work.
- The teacher will not assess the student's work if there is suspected plagiarism; the student then will be advised

to revise or redo the assignment.

• To refer the student to the Academic Committee if they decide there is plagiarism.

# Responsibilities of the School Librarian

- The school librarian is always ready to provide support and help in the correct form of research and the correct use of citations. (The school has subscriptions to databases that would provide rich resources for research.)
- To stress with the students that they should always act in honesty and integrity and to cite the ideas and work of others.

# Responsibilities of a Tarsus American College Parent

- To support the principles of academic honesty according to the school's AHP.
- When assessing student's success, to take the efforts and development of the student during the learning process as a measure rather than the expectation of high grades
- To provide the necessary ethical environment for the student to complete the academic tasks they are assigned, never attempting to do the task on behalf of the student.
- To provide necessary warnings when witnessing any act of cheating by their student or others
- To be open to cooperation as a parent and encourages the institution and development of academic honesty.



# CONSEQUENCES

- A student who violates the Academic Honesty rules and submits the work for assessment (project, homework assignment, term paper, etc.) receives the grade "0" for that work.
- A student who violates the AHP is referred to the Academic, along with relevant evidence and documentation, is reported to the appropriate Grade Level Dean, who in turn informs the Academic Committee. The student may be asked to redo the work, or referred to the Honors Committee or Discipline Committee.
- The official measures to be taken about the referral are at the discretion of the school administration.

## ACADEMIC HONESTY FOR IB STUDENTS

The procedures described in detail above apply to IBDP students as well, however, these students are also subject to the IB Academic Honesty Procedures for their academic work.



# TARSUS AMERICAN COLLEGE ACADEMIC HONESTY CONTRACT 2023-2024

Academic plagiarism (plagiarism) can be defined as using another person's ideas, words, images or data without proper citation of the source. Academic plagiarism, a violation of academic integrity, is tantamount to stealing and is never allowed.

Behaviors that will be considered academic plagiarism can be summarized as follows:

- Using statements, quotes or ideas which do not belong to the individual without reference or citation,
- Paraphrasing statements, quotes or ideas that do not belong to the individual, without reference or citation,
- Using a work or part of a work prepared for another course,
- Using all/part of an essay or a paper obtained from an institution as if it were one's own work, even when they are paid for.
- Submitting another person's work as one's own, even with permission from the original author to use it.

Teachers must rely on the integrity and authenticity of student work to maintain a successful learning environment. Plagiarism is reflected on the character, so unintentional plagiarism should be avoided at all times. It should also be remembered that academic plagiarism does not only apply to written works, but also to computer data, research, video programs, and audiovisual arts.

If you are unsure whether citing a source is necessary, you should consult with your teacher. The consequences for explicit plagiarism include losing all credit for the work as well as losing the chance to resubmit the work, which significantly reduces the grade point average for the course. In addition, academic plagiarism, which is considered a form of cheating, may result in disciplinary action according to TAC School Policy. Ways to avoid academic plagiarism are taught during Library Skills and Writing classes. This training also includes appropriate citation methods, the use of quotes, and the use of in-text citations.

I, \_\_\_\_\_have understood the content of the Tarsus American College Academic Honesty Policy, and I promise to act as required by the policy.

Signature

Date:

I have read this agreement, understand and accept the consequences to be followed in case of academic

plagiarism. Parent

Name:

Date:

Signature:



# TARSUS AMERICAN COLLEGE FORM FOR REPORTING VIOLATION OF ACADEMIC HONESTY / 2023–2024

	DATE: / /
STUDENT NAME :	
COURSE/CLASS:	
TEACHER NAME :	
WHETHER ANOTHER PROCEDURE IS REQUIRED: YES	NO

SHORT DESCRIPTION OF THE VIOLATION:

CONSEQUENCE AGREED:

I declare and agree that this document fully and correctly expresses the violation of the "Academic Honesty Policy" and the consequence to be followed for this behavior.

STUDENT SIGNATURE: .....

TEACHER SIGNATURE:

This report must be signed in three copies by the teacher and the student. The student and the teacher keep a copy while the third copy is handed to the Academic Committee.