

# ISR IB Diploma Programme Guide

August 2020 – May 2022



**Inspiring international-mindedness, academic and personal  
excellence and responsible engagement**



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## **International School Rheintal Guiding Statements**

### **International School Rheintal Vision**

ISR will be the school of choice in the Alpen Rheintal region providing a high quality international education in English for students from Kindergarten to Grade 12, inspiring international-mindedness, academic and personal excellence and responsible engagement.

**Approved November 25, 2014**

### **International School Rheintal Mission**

ISR is a supportive, challenging and child-centered environment. We encourage each student to reach his or her potential whilst promoting international mindedness, empathy and life-long learning. Through teamwork and individual endeavours, members of the school community should

- Respect and take responsibility for themselves, others and the environment
- Appreciate and respect diversity
- Think critically
- Reflect thoughtfully
- Communicate effectively
- Celebrate success.

**Approved November 25, 2014**

### **Philosophy and Objectives**

The International School Rheintal provides a high quality educational programme in English for students from Kindergarten to Grade 12 designed to meet their intellectual, physical, social and emotional needs. The school aims to:

- Challenge and support students to reach their full potential.
- Encourage students to think for themselves and acquire the skills, knowledge and understanding necessary for effective lifelong learning.
- Provide a challenging intellectual programme for exploring the academic disciplines from a global and local perspective.
- Offer a student-centered, welcoming environment which fosters an enjoyment of learning and where student achievements are celebrated.
- Nurture and appreciate a diversity of languages and cultures as a way of knowing.
- Guide students to show concern for themselves, for others, for the community and for the environment.
- Develop in its students a lasting commitment to international understanding and responsibility.
- Cultivate respect, tolerance and acceptance of others.
- Encourage students to strive to be thinkers, communicators and risk takers who are inquiring, knowledgeable, principled, open-minded, caring, balanced and reflective.

**Revised November 2012**

## **International - Mindedness at ISR**

The ISR community aims to be mindful, to be aware, respectful and appreciative of ourselves, of others and the diversity of all cultures and environments.

Through empathy, openness, inquiry, knowledge, thought, communication, care, courage, reason, reflection and principled action, our community and its members strive to understand the complexity and diversity of human interactions within and between cultures and environments.

The aim of our programs at ISR is to develop compassionate and active individuals who, recognizing their common humanity and shared guardianship of the planet, engage responsibly to create a better and more peaceful world.

## **Diploma Program English Language Requirements and Recommendations**

The IB Diploma Program at ISR is taught in English with the exception of German A/B and Language A Self-Study. Group 1 English Language A: Language and Literature, either at higher or standard level, is a required course at ISR unless a student takes a language A self-study. Therefore, it is essential that students develop strong English language skills in order to reach their potential in the Diploma Program.

MYP Grade 10 students and new students to the Diploma Program will be tested in all areas of the Woodcock-Munoz Language Survey-Revised in English. Students who do not reach the 'fluent' level will be required to attend English support lessons during Grade 11. At the end of Grade 11 they would be retested. The Counselor and the DP coordinator will determine whether further English support lessons are required in Grade 12. English support lessons may take place outside of normal school hours.

The intention of these requirements is to reinforce ISR's commitment to 'high quality education in English' therefore encouraging students throughout ISR to actively improve their English Language knowledge and skills.

## **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 is the vehicle to help students develop international mindedness.*

## 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. As IB learners, we strive to be:

Inquirers	We nurture our curiosity, developing skills for inquiry and research. We know how to learn independently and with others. We learn with enthusiasm and sustain our love of learning throughout life.
Knowledgeable	We develop and use conceptual understanding, exploring knowledge across a range of disciplines. We engage with issues and ideas that have local and global significance.
Thinkers	We use critical and creative thinking skills to analyse and take responsible action on complex problems. We exercise initiative in making reasoned, ethical decisions.
Communicators	We express ourselves confidently and creatively in more than one language and in many ways. We collaborate effectively, listening carefully to the perspectives of other individuals and groups.
Principled	We act with integrity and honesty, with a strong sense of fairness and justice, and with respect for the dignity and rights of people everywhere. We take responsibility for our actions and their consequences.
Open-minded	We critically appreciate our own cultures and personal histories, as well as the values and traditions of others. We seek and evaluate a range of points of view, and we are willing to grow from the experience.
Caring	We show empathy, compassion and respect. We have a commitment to service, and we act to make a positive difference in the lives of others and in the world around us.
Risk-takers	We approach uncertainty with forethought and determination; we work independently and cooperatively to explore new ideas and innovative strategies. We are resourceful and resilient in the face of challenges and change.
Balanced	We understand the importance of balancing different aspects of our lives—intellectual, physical and emotional—to achieve well-being for ourselves and others. We recognize our interdependence with other people and with the world in which we live.
Reflective	We thoughtfully consider the world and our own ideas and experience. We work to understand our strengths and weaknesses in order to support our learning and personal development.

*The IB learner profile represents 10 attributes valued by IB World Schools. We believe these attributes, and others like them, can help people become responsible members of local, national and global communities.*

## Introduction

In August 2006 the International School Rheintal began delivering the International Baccalaureate Diploma Programme, for which it had been authorised. This Programme is a rigorous pre-university course of studies, leading to examinations, which meet the needs of highly motivated secondary school students between the ages of 16 and 19 years. Designed as a comprehensive two-year curriculum that allows its graduates to fulfil requirements of various national education systems, the Diploma Programme model is based on the pattern of no single country but incorporates the best elements of many. The programme is available in English at the International School Rheintal. The curriculum is displayed in the shape of a circle with six academic areas surrounding the core. Subjects are studied concurrently.

Diploma Programme candidates are required to select six subjects. At least three and not more than four are taken at higher level (HL), the others at standard level (SL). Higher level courses represent 240 teaching hours; standard level courses cover 150 hours. By arranging work in this fashion, students are able to explore some subjects in depth and some more broadly over the two-year period; this is a deliberate compromise between the early specialization preferred in some national systems and the breadth found in others.

Distribution requirements ensure that the science-orientated student is challenged to learn a foreign language and that the natural linguist becomes familiar with science laboratory procedures. While overall balance is maintained, flexibility in choosing higher-level combinations allows the student to pursue areas of personal interest and to meet special requirements for university entrance.

Successful Diploma Programme candidates meet three requirements in addition to the six subjects. The interdisciplinary Theory of Knowledge (TOK) course is designed to develop a coherent approach to learning, which transcends and unifies the academic areas and encourages appreciation of other cultural perspectives. The Extended Essay of some 4000 words offers the opportunity to investigate a topic of special interest and acquaints students with the independent research and writing skills expected at university. Participation in the Creativity, Activity, Service (CAS) requirement encourages students to be involved in artistic pursuits, sports and community service work.



The school currently offers, in Grade 11, courses in two A languages, English and German, and a self-study option for other mother tongue students (Standard Level only), German *ab initio* standard level, English and German B, History, Business Management, Physics, Biology, Chemistry, and Mathematics: Applications and Interpretation. Additional subjects can be taken online.

Individual courses may not be run if there are not a sufficient number of candidates electing to study that subject.

## IB Diploma Programme Model



## Course Outlines

### **GROUP 1 - Language A: English and German**

In this course, students study a wide range of literary and non-literary texts in a variety of media. By examining communicative acts across literary form and textual type alongside appropriate secondary readings, students will investigate the nature of language itself and the ways in which it shapes and is influenced by identity and culture. Approaches to study in the course are meant to be wide ranging and can include literary theory, sociolinguistics, media studies and critical discourse analysis among others. The course is divided into three overarching areas of exploration:

#### **Area of exploration: time and space**

Time and space aims to broaden student understanding of the open, plural or cosmopolitan nature of texts ranging from advertisements to poems.

#### **Area of exploration: reader, writer, text**

Readers, writers and texts aims to introduce students to the skills and approaches required to closely examine texts as well as to introduce metacognitive awareness of the nature of the discipline.

#### **Area of exploration: intertextuality, connecting texts**

This area of exploration aims to give students a sense of the ways in which texts exist in a system of relationships with other communicative acts past and present. Students will further engage with literary and linguistic traditions and new directions by comparing and contrasting.

### **Studies in language and literature and theory of knowledge**

In language A courses students are constantly engaged with inquiry, critical thinking and reflection as they explore how meaning is generated in texts. Studies in language and literature therefore enhance the students' ability to examine diverse ways of knowing and different knowledge questions. For example, questions regarding the extent to which the reader shapes the meaning of a text, the impact of translation on a text, or the way texts influence understanding of the self and the world are continuously raised in these courses and constitute an important part of the focus of inquiry in them.

<b>Assessments HL</b>	<i>weighting</i>	<b>Assessments SL</b>	<i>weighting</i>
<p><b>External Assessment (4 hours)</b></p> <p><b>Paper 1: Guided textual analysis (2 hours 15 minutes)</b> The paper consists of two non-literary passages, from two different text types, each accompanied by a question. Students write an analysis of each of the passages. (40 marks)</p> <p><b>Paper 2: Comparative essay (1 hour 45 minutes)</b> The paper consists of four general questions. In response to one question students write a comparative essay based on two works studied in the course. (30 marks)</p> <p><b>HL essay</b> Students submit an essay on one non-literary text or a collection of non-literary texts by one same author, or a literary text or work studied during the course. The essay must be 1,200-1,500 words in length. (20 marks)</p>	<p>80%</p> <p>35%</p> <p>25%</p> <p>20%</p>	<p><b>External Assessment (3 hours)</b></p> <p><b>Paper 1: Guided textual analysis (1 hour 15 minutes)</b> The paper consists of two non-literary passages, from two different text types, each accompanied by a question. Students choose one passage and write an analysis of it. (20 marks)</p> <p><b>Paper 2: Comparative essay (1 hour 45 minutes)</b> The paper consists of four general questions. In response to one question students write a comparative essay based on two works studied in the course. (30 marks)</p>	<p>70%</p> <p>35%</p> <p>35%</p>
<b>Internal Assessment</b>	<b>20%</b>	<b>Internal Assessment</b>	<b>30%</b>
<p>This component consists of an individual oral which is internally assessed by the teacher and externally moderated by the IB at the end of the course.</p> <p><b>Individual oral (15 minutes)</b> Supported by an extract from both one non-literary text and one literary work, students will offer a prepared response of 10 minutes, followed by 5 minutes of questions by the teacher, to the following prompt: Examine the ways in which the global issue of your choice is presented through the content and form of two of the works that you have studied. (40 marks)</p>			

## **GROUP 2 – Language B**

### **Language B: English HL, German HL and German *ab initio***

Language B is an additional language-learning course designed for students with some previous learning of that language. The main focus of the course is on language acquisition and development of language skills. These language skills are developed through the study and use of a range of written and spoken material in the target language. Such material will extend from everyday oral exchanges to literary texts, and will be related to the culture(s) concerned. The material is chosen to enable students to develop mastery of language skills and intercultural understanding, and is not intended solely for the study of specific subject matter or content.

#### **Themes**

Five prescribed Themes are common to the syllabuses of Language B and Language *ab initio*; the themes provide relevant contexts for study at all levels of language acquisition in the DP, and opportunities for students to communicate about matters of personal, local or national, and global interest.

The five prescribed themes are:

1. Identities
2. Experiences
3. Human ingenuity
4. Social organization
5. Sharing the planet

#### **Language B and Theory of Knowledge**

Theory of knowledge (TOK) is central to the Diploma Programme, and the relationship between TOK and Language B is of great importance. Learning an additional language involves linguistic and metalinguistic, sociolinguistic, pragmatic and intercultural skills and competencies. Therefore, teachers are challenged to make links between TOK and Language B courses that encourage consideration and reflection upon how these skills and competencies are acquired by the language learner and, equally, imparted by the teacher.

#### **Assessment Outline - Language B HL**

##### **Paper 1 (1 hour 30 minutes) - 25%**

Productive skills—writing (30 marks)

One writing task of 450–600 words from a choice of three, each from a different Theme, choosing a text type from among those listed in the examination instructions.

**Paper 2 (2 hours) - 50%**

Receptive skills—separate sections for listening and reading (65 marks)

Listening comprehension (1 hour) (25 marks)

Reading comprehension (1 hour) (40 marks)

Comprehension exercises on three audio passages and three written texts, drawn from all five Themes.

**Individual oral assessment - 25%**

A conversation with the teacher, based on an extract from one of the literary works studied in class, followed by discussion based on one or more of the Themes from the syllabus. (30 marks)

**Assessment Outline - Language B ab initio**

**Paper 1 (1 hour) - 25%**

Productive skills—writing (30 marks)

Two written tasks of 70–150 words each from a choice of three tasks, choosing a text type for each task from among those listed in the examination instructions.

**Paper 2 (1 hour 45 minutes) - 50%**

Receptive skills—separate sections for listening and reading (65 marks)

Listening comprehension (45 minutes) (25 marks)

Reading comprehension (1 hour) (40 marks)

Comprehension exercises on three audio passages and three written texts, drawn from all five themes.

**Individual oral assessment - 25%**

A conversation with the teacher, based on a visual stimulus and at least one additional course theme. (30 marks)

## **GROUP 3 – Individuals and Societies**

### **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 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.

### **Individuals and Societies and Theory of knowledge**

Students in this subject group explore the interactions between humans and their environment in time and place. As a result, these subjects are often known collectively as the humanities or social sciences. As with other subject areas, knowledge in individuals and societies subjects can be gained in a variety of ways. For example, archival evidence, data collection, experimentation, observation, and inductive and deductive reasoning can all be used to help explain patterns of behaviour that lead to *knowledge claims*. Students in individuals and societies subjects are required to evaluate these knowledge claims by exploring concepts such as validity, reliability, credibility, certainty and individual as well as cultural perspectives through *knowledge questions*.

### **History (SL & HL)**

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

- Develop an understanding of, and continuing interest in, the past
- Encourage students to engage with multiple perspectives and to appreciate the complex nature of historical concepts, issues, events and developments
- Promote international-mindedness through the study of history from more than one region of the world

- Develop an understanding of history as a discipline and to develop historical consciousness including a sense of chronology and context, and an understanding of different historical perspectives
- Develop key historical skills, including engaging effectively with sources
- Increase students' understanding of themselves and of contemporary society by encouraging reflection on the past.

### **Prescribed subject: The move to global war**

This prescribed subject focuses on military expansion from 1931 to 1941. Two case studies are prescribed, from different regions of the world, and both of these case studies must be studied. The first case study explores Japanese expansionism from 1931 to 1941, and the second case study explores German and Italian expansionism from 1933 to 1940. The focus of this prescribed subject is on the causes of expansion, key events, and international responses to that expansion. Discussion of domestic and ideological issues should therefore be considered in terms of the extent to which they contributed to this expansion, for example, economic issues, such as the long-term impact of the Great Depression, should be assessed in terms of their role in shaping more aggressive foreign policy.

Case studies Material for detailed study

#### **Case study 1: Japanese expansion in East Asia (1931–1941)**

Causes of expansion

- The impact of Japanese nationalism and militarism on foreign policy
- Japanese domestic issues: political and economic issues, and their impact on foreign relations
- Political instability in China

Events

- Japanese invasion of Manchuria and northern China (1931)
- Sino-Japanese War (1937–1941)
- The Three Power/Tripartite Pact; the outbreak of war; Pearl Harbor (1941)

Responses

- League of Nations and the Lytton report
- Political developments within China—the Second United Front
- International response, including US initiatives and increasing tensions between the US and Japan

#### **Case study 2: German and Italian expansion (1933–1940)**

Causes of expansion

- Impact of fascism and Nazism on the foreign policies of Italy and Germany
- Impact of domestic economic issues on the foreign policies of Italy and Germany
- Changing diplomatic alignments in Europe; the end of collective security; appeasement

#### Events

- German challenges to the post-war settlements (1933–1938)
- Italian expansion: Abyssinia (1935–1936); Albania; entry into the Second World War
- German expansion (1938–1939); Pact of Steel, Nazi–Soviet Pact and the outbreak of war

#### Responses

- International response to German aggression (1933–1938)
- International response to Italian aggression (1935–1936)
- International response to German and Italian aggression (1940)

### **World history topic 1: Authoritarian states (20th century)**

This topic focuses on exploring the conditions that facilitated the rise of authoritarian states in the 20<sup>th</sup> century, as well as the methods used by parties and leaders to take and maintain power. The topic explores the emergence, consolidation and maintenance of power, including the impact of the leaders' policies, both domestic and foreign, upon the maintenance of power. Examination questions for this topic will expect students to make reference to specific authoritarian states in their responses, and some examination questions will require discussion of states from more than one region of the world. In order for students to be able to make meaningful comparisons across all aspects of the prescribed content, it is recommended that a minimum of three authoritarian states should be studied. Topic Prescribed content:

#### **Emergence of authoritarian states**

- Conditions in which authoritarian states emerged: economic factors; social division; impact of war; weakness of political system
- Methods used to establish authoritarian states: persuasion and coercion; the role of leaders; ideology; the use of force; propaganda

#### **Consolidation and maintenance of power**

- Use of legal methods; use of force; charismatic leadership; dissemination of propaganda
- Nature, extent and treatment of opposition
- The impact of the success and/or failure of foreign policy on the maintenance of power

#### **Aims and results of policies**

- Aims and impact of domestic economic, political, cultural and social policies
- The impact of policies on women and minorities
- Authoritarian control and the extent to which it was achieved

## **World history topic 2: Causes and effects of 20th century wars**

This topic focuses on the causes, practice and effects of war in the 20th century. The topic explores the causes of wars, as well as the way in which warfare was conducted, including types of war, the use of technology, and the impact these factors had upon the outcome. Examination questions for this topic will require students to make reference to specific 20th-century wars in their responses, and some examination questions will require discussion of wars from more than one region of the world. Please note that the suggested examples for this topic include “cross-regional” wars such as the First and Second World Wars. In examination questions that ask students to discuss examples of wars from different regions, students may use these wars in a regional context (for example, the Second World War in the Pacific) but may not then use the same war in a different region (for example, the Second World War in Europe) in the same response.

Topic Prescribed content

### **Causes of war**

- Economic, ideological, political, territorial and other causes
- Short- and long-term causes

### **Practices of war and their impact on the outcome**

- Types of war: civil wars; wars between states; guerrilla wars
- Technological developments; theatres of war—air, land and sea
- The extent of the mobilization of human and economic resources
- The influence and/or involvement of foreign powers

### **Effects of war**

- The successes and failures of peacemaking
- Territorial changes
- Political repercussions
- Economic, social and demographic impact; changes in the role and status of women

### **HL option: History of Europe**

Europe and the First World War (1871–1918)

European states in the inter-war years (1918–1939)

Versailles to Berlin: Diplomacy in Europe (1919–1945)

### **Historical investigation**

Students at both SL and HL are required to complete a historical investigation into a topic of their choice. The historical investigation is made of up three sections:

1. Identification and evaluation of sources
2. Investigation
3. Reflection

Students have a free choice of topic for their historical investigation—the topic need not be related to the syllabus, and students should be encouraged to use their own initiative when deciding on a topic. However, the topic must be historical, and therefore cannot be on an event that has happened in the last 10 years.

### **Business Management (SL & HL)**

Business management is a rigorous, challenging and dynamic discipline in the individuals and societies subject group. The role of businesses, as distinct from other organizations and actors in a society, is to provide goods and services that meet human needs and wants by organizing resources. Profit-making, risk-taking and operating in a competitive environment characterize most business organizations.

Although business management shares many skills and areas of knowledge with other humanities and social sciences, it is distinct in a number of ways. For example, business management is the study of decision-making and the allocation of scarce resources within an organization. It also examines the application of information technology and social responsibility in business contexts. Emphasis is placed on strategic decision-making and the operational business functions of human resource management, finance and accounts, marketing and operations management. Links between the topics are central to the course, as this integration promotes a holistic overview of business management.

### **Distinction between SL & HL**

The HL course in business management differs from the SL course in business management in terms of the:

- Recommended hours devoted to teaching (240 hours for HL compared to 150 hours for SL)
- Extra depth and breadth required (extension units for HL)
- Nature of the internal assessment task
- Nature of the examination questions.

## Aims

The course aims to develop transferable skills relevant to today's business world. These include to:

1. Encourage a holistic view of the world of business
2. Empower students to think critically and strategically about individual and organizational behaviour to support well-informed decisions
3. Promote the importance of exploring business issues from different stakeholder perspectives
4. Enable the student to appreciate the nature and significance of change in a local, regional and global context
5. Promote awareness of the importance of environmental and social factors to support ethically sound decision-making
6. Develop an understanding of the importance of innovation in a business environment.

## Assessment objectives

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

- . Demonstrate knowledge and understanding of business management tools, techniques and theories specified in the syllabus content
- . Understand and apply the key concepts that underpin the subject to real world business issues and decisions
- . Demonstrate application and analysis of knowledge and skills to a variety of real-world and fictional business situations
- . Support business decisions by explaining the issues at stake, selecting and interpreting data, and applying appropriate quantitative and qualitative techniques, theories and concepts and formulating concise recommendations
- . Demonstrate synthesis and evaluation of business strategies and practices, showing evidence of critical thinking
- . Demonstrate a variety of appropriate skills to produce well-structured written material using business terminology
- . Select and use business material, from a range of primary and secondary sources.

## Syllabus outline

Syllabus component	Teaching hours	
	SL	HL
<b>Unit 1: Business organization and environment</b>	<b>40</b>	<b>50</b>
1.1 Introduction to business management		
1.2 Types of organizations		
1.3 Organizational objectives		

1.4 Stakeholders		
1.5 External environment		
1.6 Growth and evolution		
1.7 Organizational planning tools (HL only)		
<b>Unit 2: Human resource management</b>	<b>15</b>	<b>30</b>
2.1 Functions and evolution of human resource management		
2.2 Organizational structure		
2.3 Leadership and management		
2.4 Motivation		
2.5 Organizational (corporate) culture (HL only)		
2.6 Industrial/employee relations (HL only)		
<b>Unit 3: Finance and accounts</b>	<b>35</b>	<b>50</b>
3.1 Sources of finance		
3.2 Costs and revenues		
3.3 Break-even analysis		
3.4 Final accounts (some HL only)		
3.5 Profitability and liquidity ratio analysis		
3.6 Efficiency ratio analysis (HL only)		
3.7 Cash flow		
3.8 Investment appraisal (some HL only)		
3.9 Budgets (HL only)		
<b>Unit 4: Marketing</b>	<b>35</b>	<b>50</b>
4.1 The role of marketing		
4.2 Marketing planning (including introduction to the four Ps)		
4.3 Sales forecasting (HL only)		
4.4 Market research		
4.5 The four Ps (product, price, promotion, place)		
4.6 The extended marketing mix of seven Ps (HL only)		
4.7 International marketing (HL only)		
4.8 E-commerce		

<b>Unit 5: Operations management</b>	<b>10</b>	<b>30</b>
5.1 The role of operations management		
5.2 Production methods		
5.3 Lean production and quality management (HL only)		
5.4 Location		
5.5 Production planning (HL only)		
5.6 Research and development (HL only)		
5.7 Crisis management and contingency planning (HL only)		
<b>Internal assessment</b>	<b>15</b>	<b>30</b>
<b>Total teaching hours</b>	<b>150</b>	<b>240</b>

### Assessment SL

Assessment component	Weighting
<b>External assessment (3 hours)</b>	<b>75%</b>
<b>Paper 1 (1 hour and 15 minutes)</b>	<b>35%</b>
Based on a case study issued in advance, with additional unseen material included in section B.	
Assessment objectives 1, 2, 3, 4 (50 marks)	
<i>Section A</i>	
Syllabus content: Units 1–5	
Students answer three of four structured questions. (10 marks per question)	
<i>Section B</i>	
Syllabus content: Units 1–5	
Students answer one compulsory structured question. (20 marks)	
<b>Paper 2 (1 hour and 45 minutes)</b>	<b>40%</b>
Assessment objectives 1, 2, 3, 4 (60 marks)	
<i>Section A</i>	
Syllabus content: Units 1–5	
Students answer one of two structured questions based on stimulus material with a quantitative focus. (20 marks)	
<i>Section B</i>	
Syllabus content: Units 1–5	
Students answer one of three structured questions based on stimulus material. (20 marks)	
<i>Section C</i>	

Syllabus content: Units 1–5

Students answer one of three extended response questions. This question is based primarily on two concepts that underpin the course. (20 marks).

**Internal assessment (15 teaching hours)**

**25%**

This component is internally assessed by the teacher and externally moderated by the IB at the end of the course.

**Written commentary**

Students produce a written commentary based on three to five supporting documents about a real issue or problem facing a particular organization. Maximum 1500 words. (25 marks)

**Assessment HL**

<b>Assessment component</b>	<b>Weighting</b>
<b>External assessment (4 hours and 30 minutes)</b>	<b>75%</b>
<b>Paper 1 (2 hour and 15 minutes)</b>	<b>35%</b>
Based on a case study issued in advance, with additional unseen material included in sections B and C.	
Assessment objectives 1, 2, 3, 4 (70 marks)	
<i>Section A</i>	
Syllabus content: Units 1–5 including HL extension topics	
Students answer three of four structured questions. (10 marks per question)	
<i>Section B</i>	
Syllabus content: Units 1–5 including HL extension topics	
Students answer one compulsory structured question. (20 marks)	
<i>Section C</i>	
Syllabus content: Units 1–5 including HL extension topics	
Students answer one compulsory extended response question primarily based on HL extension topics. (20 marks)	
	<b>40%</b>
<b>Paper 2 (2 hour and 15 minutes)</b>	
Assessment objectives 1, 2, 3, 4 (80 marks)	
<i>Section A</i>	
Syllabus content: Units 1–5 including HL extension topics	
Students answer one of two structured question based on stimulus material with a quantitative focus. (20 marks)	
<i>Section B</i>	
Syllabus content: Units 1–5 including HL extension topics	

Students answer two of three structured questions based on stimulus material. (20 marks per question)

*Section C*

Syllabus content: Units 1–5 including HL extension topics

Students answer one of three extended response questions. This question is based primarily on two concepts that underpin the course. (20 marks)

**Internal assessment (30 teaching hours)**

**25%**

This component is internally assessed by the teacher and externally moderated by the IB at the end of the course.

Research project: Students research and report on an issue facing an organization or a decision to be made by an organization (or several organizations). Maximum 2000 words. (25 marks)

## **GROUP 4 - Experimental Sciences**

### **Nature of science**

The Nature of Science (NOS) is an overarching theme in the biology, chemistry and physics courses. Studying Science depends increasingly on the use of technology. Despite their mutual dependence they are based on different values: science on evidence, rationality and the quest for deeper understanding; technology on the practical, the appropriate and the useful with an increasingly important emphasis on sustainability.

### **Science and the international dimension**

Science itself is an international endeavour—the exchange of information and ideas across national boundaries has been essential to the progress of science. This exchange is not a new phenomenon but it has accelerated in recent times with the development of information and communication technologies. Increasingly there is a recognition that many scientific problems are international in nature and this has led to a global approach to research in many areas. The reports of the Intergovernmental Panel on Climate Change are a prime example of this. On a practical level, the group 4 project (which all science students must undertake) mirrors the work of real scientists by encouraging collaboration.

### **Distinction between SL and HL**

Group 4 students at standard level (SL) and higher level (HL) undertake a common core syllabus, a common internal assessment (IA) scheme and have some overlapping elements in the option

studied. They are presented with a syllabus that encourages the development of certain skills, attributes and attitude.

While the skills and activities of group 4 science subjects are common to students at both SL and HL, students at HL are required to study some topics in greater depth, in the additional higher level (AHL) material and in the common options. The distinction between SL and HL is one of breadth and depth.

### **Science and Theory of knowledge**

TOK lessons can support students in their study of science, just as the study of science can support students in their TOK course. TOK provides a space for students to engage in stimulating wider discussions about questions such as what it means for a discipline to be a science, or whether there should be ethical constraints on the pursuit of scientific knowledge. It also provides an opportunity for students to reflect on the methodologies of science, and how these compare to the methodologies of other areas of knowledge.

The different scientific disciplines share a common focus on utilizing inductive and deductive reasoning, on the importance of evidence, and so on. Students are encouraged to compare and contrast these methods with the methods found in, for example, the arts or in history.

Knowledge questions are open ended questions about the nature of knowledge, such as:

- How do we distinguish science from pseudoscience?
- When performing experiments, what is the relationship between a scientist's expectation and their perception?
- How does scientific knowledge progress?
- What is the role of imagination and intuition in the sciences?
- What are the similarities and differences in methods in the natural sciences and the human sciences?

### **Group 4 aims**

Through studying biology, chemistry or physics, students should become aware of how scientists work and communicate with each other. While the scientific method may take on a wide variety of forms, it is the emphasis on a practical approach through experimental work that characterizes these subjects.

### **Assessment objectives**

The assessment objectives for biology, chemistry and physics reflect those parts of the aims that will be formally assessed either internally or externally. These assessments will centre upon the nature of science.

## External assessment

Detailed markschemes specific to each examination paper are used to assess students.

### External assessment details—SL

#### *Paper 1*

**Duration:**  $\frac{3}{4}$  hour **Weighting:** 20% **Marks:** 30

- 30 multiple-choice questions on core material, about 15 of which are common with HL.
- The questions on paper 1 test assessment objectives 1, 2 and 3.

#### *Paper 2*

**Duration:** 1¼ hours **Weighting:** 40% **Marks:** 50

- Data-based question.
- Short-answer and extended-response questions on core material.
- One out of two extended response questions to be attempted by candidates.
- The questions on paper 2 test assessment objectives 1, 2 and 3.

#### *Paper 3*

**Duration:** 1 hour **Weighting:** 20% **Marks:** 35

- This paper will have questions on core and SL option material.
- Section A: candidates answer all questions, two to three short-answer questions based on experimental skills and techniques, analysis and evaluation, using unseen data linked to the core and additional HL material.
- Section B: short-answer and extended-response questions from one option.
- The questions on paper 3 test assessment objectives 1, 2 and 3.

### External assessment details—HL

#### *Paper 1*

**Duration:** 1 hour **Weighting:** 20% **Marks:** 40

- 40 multiple-choice questions on core and additional HL material, about 15 of which are common with SL.
- The questions on paper 1 test assessment objectives 1, 2 and 3.

#### *Paper 2*

**Duration:** 2¼ hours **Weighting:** 36% **Marks:** 72

- Data-based question.
- Short-answer and extended-response questions on core and additional HL material.
- Two out of three extended response questions to be attempted by candidates.
- The questions on paper 2 test assessment objectives 1, 2 and 3.

### ***Paper 3***

**Duration: 1¼ hours Weighting: 24% Marks: 45**

- Section A: candidates answer all questions, two to three short-answer questions based on experimental skills and techniques, analysis and evaluation, using unseen data linked to the core material.
- Section B: short-answer and extended-response questions from one option.
- The questions on paper 3 test assessment objectives 1, 2 and 3.

#### **Internal assessment details**

Internal assessment is an integral part of the course 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. The internal assessment requirements at SL and at HL are the same.

#### **Internal assessment component**

Duration: 10 hours Weighting: 20%

- Individual investigation.

#### **Internal assessment criteria**

The assessment model uses five criteria to assess the final report of the individual investigation with the following raw marks and weightings assigned:

Personal engagement (8%)

Exploration (25%)

Analysis (25%)

Evaluation (25%)

Communication (17%)

Total (100%)

Levels of performance are described using multiple indicators per level.

#### **Practical work and internal assessment**

The internal assessment requirements are the same for biology, chemistry and physics. The internal assessment, worth 20% of the final assessment, consists of one scientific investigation. Student work is internally assessed by the teacher and externally moderated by the IB. The performance in internal assessment at both SL and HL is marked against common assessment criteria. The practical programme is flexible enough to allow a wide variety of practical activities to be carried out. These could include:

- Short labs or projects extending over several weeks
- Computer simulations
- Using databases for secondary data
- Developing and using models
- Data-gathering exercises such as questionnaires, user trials and surveys
- Data-analysis exercises
- Fieldwork.

### Group 4 project

The group 4 project is an interdisciplinary activity in which all Diploma Programme science students must participate. The intention is that students from the different group 4 subjects analyse a common topic or problem. The exercise is a collaborative experience where the emphasis is on the processes involved in, rather than the products of, such an activity.

### Biology

Biology is the study of life. Biologists attempt to understand the living world at all levels using many different approaches and techniques. At one end of the scale is the cell, its molecular construction and complex metabolic reactions. At the other end of the scale biologists investigate the interactions that make whole ecosystems function. Many areas of research in biology are extremely challenging and many discoveries remain to be made.

### Syllabus outline

Syllabus component	Recommended Teaching hours	
	SL/HL	
<b>Core</b>	<b>95</b>	
1. Cell biology	15	
2. Molecular biology	21	
3. Genetics	15	
4. Ecology	12	
5. Evolution and biodiversity	12	
6. Human physiology	20	
		<b>HL</b>
<b>Additional higher level (AHL)</b>		<b>60</b>
7. Nucleic acids		9
8. Metabolism, cell respiration and photosynthesis		14
9. Plant biology		13
10. Genetics and evolution		8
11. Animal physiology		16
<b>Option</b>	<b>15</b>	<b>25</b>
Neurobiology and behavior	15	25
<b>Practical scheme of work</b>	<b>40</b>	<b>60</b>

Practical activities	20	40
Individual investigation (internal assessment–IA)	10	10
Group 4 project	10	10
<b>Total teaching hours</b>	<b>150</b>	<b>240</b>

The recommended teaching time is 240 hours to complete HL and 150 hours to complete SL courses.

### Chemistry (not chosen 2020-2022)

Chemistry is an experimental science that combines academic study with the acquisition of practical and investigational skills. It is often called the central science, as chemical principles underpin both the physical environment in which we live and all biological systems.

The Diploma Programme chemistry course includes the essential principles of the subject and allows students to develop traditional practical skills and techniques and to increase facility in the use of mathematics, which is the language of science. It also allows students to develop interpersonal skills, and digital technology skills, which are essential in 21st century scientific endeavour and are important life-enhancing, transferable skills in their own right.

### Syllabus outline

Syllabus component	Recommended teaching hours	
	SL /HL	HL
<b>Core</b>	<b>95</b>	
1. Stoichiometric relationships	13.5	
2. Atomic structure	6	
3. Periodicity	6	
4. Chemical bonding and structure	13.5	
5. Energetics/thermochemistry	9	
6. Chemical kinetics	7	
7. Equilibrium	4.5	
8. Acids and bases	6.5	
9. Redox processes	8	
10. Organic chemistry	11	
11. Measurement and data processing	10	

<b>Additional higher level (AHL)</b>		<b>60</b>
12. Atomic structure		2
13. The periodic table—the transition metals		4
14. Chemical bonding and structure		7
15. Energetics/thermochemistry		7
16. Chemical kinetics		6
17. Equilibrium		4
18. Acids and bases		10
19. Redox processes		6
20. Organic chemistry		12
21. Measurement and analysis		2
<b>Option</b>	<b>15</b>	<b>25</b>
Medicinal Chemistry	15	25
	<b>40</b>	<b>60</b>
<b>Practical scheme of work</b>		
Practical activities	20	40
Individual investigation (internal assessment—IA)	10	10
Group 4 project	10	10
<b>Total teaching hours</b>	<b>150</b>	<b>240</b>

The recommended teaching time is 240 hours to complete HL courses and 150 hours to complete SL courses.

### Physics

Physics is the most fundamental of the experimental sciences, as it seeks to explain the universe itself from the very smallest particles—currently accepted as quarks, which may be truly fundamental—to the vast distances between galaxies. The Diploma Programme physics course allows students to develop traditional practical skills and techniques and increase their abilities in the use of mathematics, which is the language of physics. It also allows students to develop interpersonal and digital communication skills which are essential in modern scientific endeavour and are important life-enhancing, transferable skills in their own right. Illuminating its historical development places the knowledge and the process of physics in a context of dynamic change, in contrast to the static context in which physics has sometimes been presented.

## Syllabus outline

Syllabus component	Recommended Teaching hours	
	SL/HL	HL
Core	95	
Measurements and uncertainties	5	
Mechanics	22	
Thermal physics	11	
Waves	15	
Electricity and magnetism	15	
Circular motion and gravitation	5	
Atomic, nuclear and particle physics	14	
Energy production	8	
<b>Additional higher level (AHL):</b>		<b>60</b>
Wave phenomena		17
Fields		11
Electromagnetic induction		16
Quantum and nuclear physics		16
Option		
Imaging	15	25
Practical scheme of work	40	60
Practical activities	20	40
Individual investigation (internal assessment – IA)	10	10
Group 4 project	10	10
Total teaching hours	150	240

The recommended teaching time is 240 hours to complete HL courses and 150 hours to complete SL courses.

## **GROUP 5 - Mathematics**

Mathematics has been described as the study of structure, order and relation that has evolved from the practices of counting, measuring and describing objects. Mathematics provides a unique language to describe, explore and communicate the nature of the world we live in as well as being a constantly building body of knowledge and truth in itself that is distinctive in its certainty. These two aspects of mathematics, a discipline that is studied for its intrinsic pleasure and a means to explore and understand the world we live in, are both separate yet closely linked.

Every IB Diploma students must take a course in mathematics. At the International School Rheintal Math Application and Interpretation Higher Level (HL) and Standard Level (SL) are offered as in-house courses.

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

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

### **Mathematics and Theory of Knowledge**

As an area of knowledge, mathematics seems to supply a certainty perhaps missing in other disciplines. This may be related to the “purity” of the subject that makes it sometimes seem divorced from reality. However, mathematics has also provided important knowledge about the world, and the use of mathematics in science and technology has been one of the driving forces for scientific advances.

### **Mathematics Application and Interpretation (AI)**

Mathematics AI recognizes the increasing role that mathematics and technology play in a diverse range of fields in a data-rich world. As such, it emphasizes the meaning of mathematics in context by focusing on topics that are often used as applications or in mathematical modelling. To give this understanding a firm base, this course also includes topics that are traditionally part of a pre-university mathematics course such as calculus and statistics.

The course makes extensive use of technology to allow students to explore and construct mathematical models. Mathematics: applications and interpretation will develop mathematical thinking, often in the context of a practical problem and using technology to justify conjectures.

### **Mathematics: applications and interpretation: Difference between Standard Level and Higher Level**

Both SL or HL students should enjoy seeing mathematics used in real-world contexts and to solve real-world problems. Students who wish to take Mathematics: applications and interpretation at higher level will have good algebraic skills and experience of solving challenging real-world problems and undertake this exploration using technology.

### **Assessment Objectives**

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. Having followed a DP mathematics course, students will be expected to demonstrate the following:

- **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.

## Content

Six topics are covered in Mathematics SL which include:

1. Number and Algebra
2. Functions
3. Geometry and trigonometry
4. Statistics and probability
5. Calculus

The syllabus for this course contains topics that are similar to, but less extensive than, those of the HL course.

## The Toolkit

Students undertake activities that mathematicians in the real world undertake and to allow students time to develop the skill of thinking like a mathematician—in other words providing students with a mathematical toolkit which will allow them to approach any type of mathematical problem.

The use of technology is an integral part of DP mathematics courses. Learning how to use different forms of technology is an important skill in mathematics and time has been allowed in each topic of the syllabus and through the “toolkit” in order to do this.

In the classroom teachers and students can use technology, working individually or collaboratively, to explore mathematical concepts.

## **Assessment**

### **Application and Interpretation SL**

Assessment consists of two externally assessed examinations (80% in total):

Paper 1: (1 hour 30 minutes, 80 marks, 40%). Graphic display calculator required.

- Section A Compulsory short-response questions based on the whole syllabus.

Paper 2: (1 hour 30 minutes, 80 marks, 40%) Graphic display calculator required.

- Compulsory extended-response questions based on the entire syllabus.

### **Internal assessment (20%)**

This component is internally assessed by the teacher and externally moderated by the IB at the end of the course.

### **Mathematical exploration**

Internal assessment in mathematics is an individual exploration. This is a piece of written work that involves investigating an area of mathematics.

### **Application and Interpretation HL**

Assessment consists of two externally assessed examinations (80% in total):

Paper 1: (2 hours , 110 marks, 30%). Graphic display calculator required.

- Section A Compulsory short-response questions based on the whole syllabus.

Paper 2: (1 hours , 110 marks, 30%) Graphic display calculator required.

- Compulsory extended-response questions based on the entire syllabus

Paper 3: (1 hour , 55 marks, 20%) Graphic display calculator required.

- Two compulsory extended response problem-solving questions.

### **Internal assessment (20%)**

It has similar requirements as SL, which is mentioned above.

### **The purpose of the exploration**

The aims of the Mathematics: applications and interpretation courses at both SL and HL are carried through into the objectives that are formally assessed as part of the course, through either written examination papers or the exploration, or both. In addition to testing the objectives of the course, the exploration is intended to provide students with opportunities to increase their understanding of mathematical concepts and processes, and to develop a wider appreciation of mathematics. These are noted in the aims of the course. It is intended that, by doing the exploration, students benefit from the mathematical activities undertaken and find them both stimulating and rewarding. It will enable students to acquire the attributes of the IB learner profile.

### **The specific purposes of the exploration are to:**

- develop students' personal insight into the nature of mathematics and to develop their ability to ask their own questions about mathematics
- provide opportunities for students to complete a piece of mathematical work over an extended period of time
- enable students to experience the satisfaction of applying mathematical processes independently
- provide students with the opportunity to experience for themselves the beauty, power and usefulness of mathematics
- encourage students, where appropriate, to discover, use and appreciate the power of technology as a mathematical tool
- enable students to develop the qualities of patience and persistence, and to reflect on the significance of their work
- provide opportunities for students to show, with confidence, how they have developed mathematically.

### **Management of the exploration**

Work for the exploration should be incorporated into the course so that students are given the opportunity to learn the skills needed. Time in class can therefore be used for general discussion of areas of study, as well as familiarizing students with the criteria.

Students will be advised and provided more information about preparing, planning, authenticity and assessment criteria in this regard.

## **GROUPS 2, 3 & 6 – No online subjects chosen 2020-2022**

This course is offered online through an external company certified by the IB. If you have any questions concerning online courses offered, please ask the Diploma Coordinator.

## **The Core**

### **Creativity, Activity and Service (CAS)**

#### **The Nature of CAS**

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

- **Creativity**—exploring and extending ideas leading to an original or interpretive product or performance
- **Activity**—physical exertion contributing to a healthy lifestyle
- **Service**—collaborative and reciprocal engagement with the community in response to an authentic need.

CAS 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 formally begins at the start of the Diploma Programme and continues regularly, ideally on a weekly basis, for at least **18 months** with a reasonable balance between creativity, activity, and service.

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

Completion of CAS is based on student achievement of the seven **CAS learning outcomes**. Through their CAS portfolio, students provide the school with evidence demonstrating achievement of each learning outcome.

Students engage in **CAS experiences** involving one or more of the three CAS strands. A CAS experience can be a single event or may be an extended series of events.

**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.

**The responsibility of the CAS student**

**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.

The CAS coordinator assists students in understanding what may or may not be a CAS experience. There are four guidelines that should be applied to any proposed CAS experience. A CAS experience must:

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

To further assist students in deciding on a CAS experience, the following questions may be useful for students to consider:

- Will the experience be enjoyable?
- Does the experience allow for development of personal interests, skills and/or talents?
- What new possibilities or challenges could the experience provide?
- What might be the possible consequences of your CAS experience for you, others and the environment?
- Which CAS learning outcomes may be addressed?

**While it is not necessary for each CAS experience to address a CAS learning outcome, upon completion of the CAS programme, CAS students are required to present evidence demonstrating achievement of all CAS learning outcomes.**

### **CAS learning outcomes**

- Identify own strengths and develop areas for growth
  - Students are able to see themselves as individuals with various abilities and skills, of which some are more developed than others.

- Demonstrate that challenges have been undertaken, developing new skills in the process
  - A new challenge may be an unfamiliar experience or an extension of an existing one. The newly acquired or developed skills may be shown through experiences that the student has not previously undertaken or through increased expertise in an established area.
- Demonstrate how to initiate and plan a CAS experience
  - Students can articulate the stages from conceiving an idea to executing a plan for 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.
- Show commitment to and perseverance in CAS experiences
  - Students demonstrate regular involvement and active engagement in CAS.
- Demonstrate the skills and recognize the benefits of working collaboratively
  - Students are able to identify, demonstrate and critically discuss the benefits and challenges of collaboration gained through CAS experiences.
- Demonstrate engagement with issues of global significance
  - Students are able to identify and demonstrate their understanding of global issues, make responsible decisions, and take appropriate action in response to the issue either locally, nationally or internationally.
- Recognize and consider the ethics of choices and actions
  - Students show awareness of the consequences of choices and actions in planning and carrying out CAS experiences.

Students will be presenting this evidence through their CAS portfolio, which will be kept up to date on Managebac.

### **Theory of Knowledge**

The TOK course provides students with an opportunity to **explore and reflect on the nature of knowledge and the process of knowing**. It is a core element of the DP to which schools **are required to devote at least 100 hours of class time**.

In TOK, students reflect on the knowledge, beliefs and opinions that they have built up from their years of academic studies and their lives outside the classroom. The course is intended to be challenging and thought-provoking—as well as empowering—for students.

The course centres on the **exploration of knowledge questions**, which are a key tool for both teachers and students. These are contestable questions about knowledge itself, such as: “What counts as good evidence for a claim?”, “Are some types of knowledge less open to interpretation than others?”, or “What constraints should there be on the pursuit of knowledge?”. While these questions may initially seem slightly intimidating, they become much more accessible when considered with reference to specific examples within the TOK course.

The TOK curriculum is made up of three deeply interconnected parts.

- **The core theme—Knowledge and the knower:** This theme encourages students to reflect on themselves as knowers and thinkers, and to consider the different communities of knowers to which we belong.
- **Optional themes:** This element provides an opportunity to take a more in-depth look at two themes of particular interest to teachers and students. The given themes all have a significant impact on the world today and play a key role in shaping people’s perspectives and identities. Teachers select two optional themes from a choice of five: knowledge and technology; knowledge and language; knowledge and politics; knowledge and religion; and knowledge and indigenous societies.
- **Areas of knowledge:** The areas of knowledge (AOK) are specific branches of knowledge, each of which can be seen to have a distinct nature and sometimes use different methods of gaining knowledge. In TOK, students explore five compulsory areas of knowledge: history; the human sciences; the natural sciences; mathematics; and the arts.

To help teachers and students explore these three parts of the TOK curriculum, guidance and suggested knowledge questions are provided. These suggested knowledge questions are organized into a **framework of four elements: scope, perspectives, methods and tools, and ethics**. This “knowledge framework” encourages a deep exploration of each theme and AOK. Having these common elements run throughout the different parts of the curriculum also helps to unify the course and helps students to make effective connections and comparisons across the different themes and areas of knowledge.

There are **two assessment tasks** in the TOK course.

- **The TOK exhibition** at the end of Grade 11 assesses the ability of the student to show how TOK manifests in the world around us. The exhibition is an internal

assessment component; it is marked by the teacher and is externally moderated by the IB.

- **The TOK essay** in Grade 12 engages students in a more formal and sustained piece of writing in response to a title focused on the areas of knowledge. The essay is an external assessment component; it is marked by IB examiners. The essay must be a maximum of 1,600 words and must be on one of the six prescribed titles issued by the IB for each examination session.

### **Extended Essay**

As part of the IB Diploma Programme candidates must complete a formal research paper during their IB Diploma studies. The Extended Essay is an integral part of the IB program. Its process and completion emphasizes independent research, candidate dedication, academic interest, and organization. IB Diploma recipients often say that the lessons they learned from the Extended Essay are the most valuable part of the IB Diploma Program. The student begins work on the essay in January of Grade 11 and works in monitored steps toward completion of the Extended Essay by the end of December in Grade 12. Students pursuing the IB Diploma are required to choose a topic from within an IB subject they are studying.

All IB Diploma candidates receive information on the Extended Essay, complete with detailed instructions, suggestions for the research and writing process, and a timeline of required deadlines. They also receive and have access to the IBDP Extended Essay Guide, which contains all the requirements and criteria necessary to produce a quality essay.

The extended essay offers the opportunity for IB students to investigate a topic of special interest, in the form of a 4,000-word piece of independent research. Students select an area of research from Diploma Programme subjects, or in the case of the interdisciplinary world studies essay from two subjects, and become acquainted with the independent research and writing skills expected at university. 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 or subjects chosen. It is intended to promote high-level research and writing skills, intellectual discovery and creativity. As an authentic learning experience, the

extended essay provides students with an opportunity to engage in personal research on a topic of choice, under the guidance of a supervisor.

As a substantial independent task, students undertaking an extended essay will need to identify and develop the necessary self-management skills to be successful. While support and guidance can be given from supervisors, part of the learning experience for students is to navigate their way through the extended essay independently. The benefits of the development of these skills are recognized when students progress to university and the workplace, and are expected to be able to manage their workloads and competing priorities.

Examples of approaches and activities that develop students' self-management skills in the extended essay include:

- establishing clear deadlines, managing expectations and specifying consequences if these are not met
- providing guidance and support regarding study techniques, such as time management, note-taking, mind mapping, and digital behaviour
- promoting the Researcher's reflection space as a planning and progress tool
- organizing supervision and reflection sessions which provide an opportunity for students to discuss their progress.

Key features of the extended essay:

- The extended essay is compulsory for all students taking the Diploma Programme and is an option for course students.
- A student must achieve a D grade or higher to be awarded the Diploma.
- The extended essay is externally assessed and, in combination with the grade for theory of knowledge, contributes up to three points to the total score for the IB Diploma.
- The extended essay process helps prepare students for success at university and in other pathways beyond the Diploma Programme.
- The extended essay is a piece of independent research on a topic chosen by the student in consultation with a supervisor in the school.
- It is presented as a formal piece of sustained academic writing containing no more than 4,000 words accompanied by a reflection form of no more than 500 words.
- It is the result of approximately 40 hours of work by the student.

- Students are supported by a supervision process recommended to be 3–5 hours, which includes three mandatory reflection sessions.
- The third and final mandatory reflection session is the *viva voce*, which is a concluding interview with the supervising teacher.

Reflection in the extended essay:

- Reflection in the extended essay focuses on the student’s progress during the planning, research and writing process. It is intended to help students with the development of their extended essay as well as allowing them the opportunity to consider the effectiveness of their choices, to re-examine their ideas and to decide whether changes are needed.
- The emphasis in the extended essay is on **process** reflection, characterized by reflecting on conceptual understandings, decision-making, engagement with data, the research process, time management, methodology, successes and challenges, and the appropriateness of sources.
- Students will be encouraged to informally reflect throughout the experience of researching and writing the extended essay, but are required to reflect formally during the reflection sessions with their supervisor and when completing the reflections on planning and progress form.

The student:

As the extended essay is an important component of the Diploma Programme, and a substantial piece of work, students need to ensure that they understand the expectations of the task and manage their time and workload effectively. The following suggestions are given as guidance to help with the process.

Students are **strongly** recommended to:

- develop a Researcher’s reflection space as a planning tool
- use the Researcher’s reflection space to prepare for reflection sessions
- share excerpts from the Researcher’s reflection space with the supervisor during the reflection sessions

- choose a subject, followed by a topic, and then think carefully about the research question for their essay
- plan how, when and where they will find material and sources for their essay before deciding on the final topic and research question
- plan a schedule for both the researching and writing of their extended essay, including extra time for delays and unforeseen problems
- record sources as their research progresses using their Researcher's reflection space rather than trying to reconstruct a list at the end
- make the most of their supervision and reflection sessions by arriving prepared to discuss their work
- have a clear structure for the essay before beginning to write
- check and proofread the final version of their extended essay
- make sure that the version they submit for assessment is the final version with all sources correctly and consistently referenced
- ensure that all requirements are met.

### **Theory of Knowledge and Extended Essay Bonus Points**

In order to be considered for the award of an IB diploma each candidate must submit an Extended Essay on a topic of his/her choice in one of the subjects of the IB curriculum. An external examiner appointed by the IB will assess the essay. It is possible for candidates to be awarded three bonus points on the basis of their **overall** performance in Theory of Knowledge and the Extended Essay. According to the quality of work in each of these two important requirements for the IB Diploma, a candidate's performance will fall into one of five bands:

Band A Work of an excellent standard

Band B Work of a good standard

Band C Work of a satisfactory standard

Band D Work of a mediocre standard

Band E Work of an elementary standard

The total number of bonus points awarded will be determined according to the following matrix:

## The diploma points matrix

May 2015 onwards

		Theory of knowledge					
		Grade A	Grade B	Grade C	Grade D	Grade E	No grade N
Extended essay	Grade A	3	3	2	2	Failing condition	Failing condition
	Grade B	3	2	2	1	Failing condition	Failing condition
	Grade C	2	2	1	0	Failing condition	Failing condition
	Grade D	2	1	0	0	Failing condition	Failing condition
	Grade E	Failing condition	Failing condition	Failing condition	Failing condition	Failing condition	Failing condition
	No grade N	Failing condition	Failing condition	Failing condition	Failing condition	Failing condition	Failing condition

**Changes from *The diploma points matrix (May 2010 - November 2014)*:**

- B + C combination now results in 2 additional points (previously 1 point).
- A + E combination now results in zero points and a failing condition (previously 1 point).



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For each individual subject, a student can attain a maximum grade of 7 and therefore a 42 point subject maximum. Consulting the matrix, it can be seen that there are a further 3 bonus points available to give a maximum IB score of 45 points. Depending on the performance in both the Extended Essay and Theory of Knowledge, these points will be added to the six IB academic scores the student receives. It is clearly in the student's interest to put a great deal of effort into their TOK essay and presentation as well as into their Extended Essay.

**All further regulations about the award of the IB Diploma are stipulated in the IBDP General Regulations.**

## **Conclusion**

Students who are unable to achieve the necessary points and conditions as specified in the IBDP Regulations do not receive an IB Diploma. They will receive instead the "Diploma Programme Courses Results", a document listing the subjects taken and overall scores. Students may choose to register only for Diploma courses and not the full Diploma; however we strongly encourage students to try for the full IB Diploma, as it will serve them well in the future. Universities in many countries do not accept students who only have some Diploma courses.

Successful completion of the IB Diploma requires dedication and organisation by the student. The teachers at ISR will provide the necessary support and guidance, but in the end it is the perseverance and commitment of the student that counts the most.

## Grade 11 (2020-2022)

### Timetable for Coursework Deadlines

#### Year 1 2020-2021

Date	Activity	Supervision
August 29	Back to School Evening	DP Coordinator
Dec 7 <sup>th</sup> – Dec 11 <sup>th</sup>	Mid-term examinations	DP Coordinator
Dec 14 <sup>th</sup>	CAS Portfolio up to date	CAS Coordinator
March 15 <sup>th</sup>	CAS Portfolio up to date	CAS Coordinator
May 31 <sup>st</sup> – June 3 <sup>rd</sup>	Final Exams	DP Coordinator
June 11 <sup>th</sup> -15 <sup>th</sup> June 18 <sup>th</sup> Before the summer break	TOK Exhibition CAS Portfolio up to date German B - All IAs done apart from the Individual Oral	DP Teachers CAS Coordinator German B Teacher

#### Year 2 2021-2022 (Provisional)

Week of September 28th Before the autumn break	English B Individual Oral German B Individual Oral	English B Teacher German B Teacher
October 17 <sup>th</sup>	Business Project	Business Teacher
October 23 <sup>rd</sup>	CAS Portfolio up to date	CAS Coordinator
October 23 <sup>rd</sup>	Science IA	Science Teachers
October 26 <sup>th</sup>	Historical Investigation	History Teacher
November 8 <sup>th</sup> November Week November 12th November 18th	Math SL/HL IA Group 4 project German B Individual Oral <b>German A LL Individual Oral</b>	Math Teacher Science Teachers German B Teacher German A Teacher
December 4 <sup>th</sup> December 15 <sup>th</sup> December 16th December 17 <sup>th</sup>	TOK Essay Draft Version TOK Final Essay German A HL Essay, first draft CAS Portfolio Complete	DP Coordinator DP Coordinator German A Teacher CAS Coordinator
January 17th/18th January 15 <sup>th</sup>	English A LL Individual Oral 2nd Science IA	English A Teacher Science Teachers
February 10th February 22nd February 22 <sup>nd</sup> – 26 <sup>th</sup> March 23 <sup>rd</sup>	German A LL HL Essay final draft English A LL HL Essay Mock Exams Final CAS Portfolio Complete	German A Teacher English A Teacher DP Coordinator CAS Coordinator
May 2 <sup>nd</sup> – 20 <sup>th</sup>	IB Exams	DP Coordinator

## Grade 11 (2020-2022)

### Timetable for the Extended Essay

#### Year 1 2020-2021

Date	Activity	Supervision
August 27 <sup>th</sup> – 28 <sup>th</sup>	IB Retreat	Diploma Coordinator/ CAS Coordinator
January 7 <sup>th</sup>	Initial ideas for EE	EE Supervisor/ Diploma Coordinator
January 11 <sup>th</sup>	EE Criteria Meeting	
February 1	Selection of EE Topic + supervisor	EE Supervisor/ Diploma Coordinator
March 8 <sup>th</sup>	Review of progress with EE, preliminary MLA bibliography, appropriate source and methodology identified. List of key questions and outline.	EE Supervisor/ Diploma Coordinator
April 19	Review of Progress I: Expanded MLA bibliography, working outline for the Essay, based on questions and research. Formulated research question/thesis and working draft with 1200-1500 words	EE Supervisor
June 7	Review of Progress II: 1750-2500 Words	EE Supervisor
June 23 – 25	EE and IA in school work days	Organised with Supervisor DP Coordinator

#### Year 2 2021-2022 (Provisional)

Date	Activity	Supervision
August	IB Retreat	Diploma Coordinator/ CAS Coordinator
August 22	EE Draft Version	DP Coordinator /Supervisor
Sept 25 <sup>th</sup>	Progress check	EE Supervisor
November 20 <sup>th</sup>	Second draft of EE to supervisor. Reflection, Introduction, Conclusion, MLA bibliography and referencing, appendices (if required) Proofread Self Assessment and EE criteria mark	EE Supervisor/Diploma Coordinator All Diploma Teachers will review this draft version
December 14 <sup>th</sup> 2019	Submit Final version of EE to supervisor and electronic version to DP Coordinator	EE Supervisor/ Diploma Coordinator
January 8 <sup>th</sup> 2020	Submit Final tweaked copy of EE to supervisor and electronic version to DP Coordinator with Reflection	EE Supervisor/ Diploma Coordinator

## International Baccalaureate Fees

Registration and examination Fees will be in the region of CHF 1200. The precise cost is not known until the year of examination, when the IB publishes the relevant costs. As soon as the details are published the school will send them out in order for parents to pay the necessary sum into the school's bank account, which is then paid directly to the IB. The school covers the cost of postage (courier service) for the coursework and examination scripts.

## Remarking, Re-moderating and Retaking Exam Fees and Conditions Regulations

Remarking, re-moderating, retaking exams and other services offered by the IB regarding the IB Diploma exams are charged the costs as set by the IB and this amount is sent directly to the IB. These fees are subject to change and are announced yearly.

### **IB Fees** (1 September 2019 to 31 August 2020):

#### Remarking & Remoderating

Remarking: CHF 146 plus tax per subject

Remoderating: CHF 352 plus tax per subject

Return of marked coursework: CHF 23 plus tax per subject

#### Retakes: *November 2020*

IB costs **before** the July 29<sup>th</sup> registration deadline for retaking exams:

CHF 203 plus tax for candidate registration fee

CHF 140 plus tax per subject

**After** the July 29<sup>th</sup> deadline **'the highest fees will apply'**.

### **IB Costs are based on the IB Publication:**

#### ***Fees and billing information for IB World Schools***

*Period from 1 September 2019 to 31 August 2020 for the May 2020 and November 2020 examinations sessions*

It is possible for students to retake Diploma Exams in May of the following year. This avoids the July 29<sup>th</sup> deadline, however a disadvantage may be the lengthy time period between actually being in the course and taking the exams. Students can take Diploma exams a maximum of three times.

**In addition, there are charges for services provided by ISR for retake candidates who are no longer full time registered students at ISR. The following internal costs are charged for retaking the exams:**

- ISR Administration Fees
  - Internal ISR students CHF 750 + CHF 250 per subject

- External students CHF 1250 + CHF 250 per subject
- Supervision/Invigilation Fee CHF 80 per 40 minutes of examinations or part thereof.
- Rate for tuition and support by ISR teachers for exams and Internal Assessment/Extended Essay/Theory of Knowledge is CHF 80 per 40 minutes.
- Postage Fees are variable costs as calculated by DHL. Many exams are posted to the United Kingdom, but may also be posted to other parts of the world incurring substantial cost.

### **Important information:**

- For retake exams taken in November, the administration fee must be paid to ISR by the end of September. For retake exams taken in May the administration fee must be paid to ISR by the end of March. The supervision fees and the postage fees will need to be paid once these amounts are known.
- Where more than one student takes the same exam, the supervision fees and postage fees will be evenly split between the students taking the exam. Therefore retaking exams in May would cost less, as supervision/invigilation and postage costs would be distributed among the current grade 12 students as well.
- The school is required to post the exams using DHL and they are sent to examiners in various places around the world as decided by the IB. The postage fees to send a full set of exams in 6 subjects for one student may be as high as CHF 3'000 to CHF 4'000, depending on where the exams must be sent; for students sitting for less than 6 subjects the postage costs will be proportionately less.
- If a candidate withdraws from the retakes, all IB fees still apply except if there was an increased mark in a particular subject due to a remark, and half the ISR administration fee will be refunded.
- Some universities require that students retake **all** subjects simultaneously for the retake to be accepted.
- ***Retaking exams should be carefully considered, as doing so will likely be a very expensive undertaking. Students are highly encouraged to do the best that they can do when sitting Diploma exams for the first time.***

## CIS Accredited ISR Diploma Requirements

The Diploma requirements of ISR ensure that all students receive the breadth of program necessary for a sound education and accessible future prospects.

In order to graduate from ISR and achieve an ISR Diploma, a student must spend at least Grade 12 at ISR and have successfully completed four years of high school (Grades 9-12) maintaining satisfactory attendance.

### Grade 11 and 12 internal requirements:

- Students must achieve at least 16 points in the Grade 11 and 12 Diploma Program
- Students must achieve at least grade 2 or above in each subject course
- Extended Essay, TOK and CAS must be satisfactorily completed

### Grade 9 and 10 students must satisfactorily complete the following:

Subject Area	Years of Study
First Language	2
Mathematics	2
Individuals and societies	2
Sciences	2
Second Language	1
Third Language/Elective	1
The Arts	1
Physical Education	1

### Explanatory Notes:

- o All graded courses may be used for credit towards a CIS Accredited ISR Diploma.
- o All requirements, except previously earned grades, must be completed during ISR enrolment.
- o Grades from high schools other than ISR, Grades 9-11, are granted on the basis of the identity of the class content, requirements and time spent in class in the school from which the student comes, as compared with the course requirements and the time spent in class at ISR. This is usually determined on an individual basis.
- o EAL courses may fulfill English requirements.
- o It is generally expected that most students will study German each year at ISR with the exception of Grade 11 and 12 Language A: Literature Self-Study for those who have another first language.
- o Grade 9 and 10 students are required to enroll in all courses offered and Grades 11 and 12 students are required to enroll in 6 Standard level IB courses, Extended Essay, Theory of Knowledge and CAS. Students are encouraged to select a program of study that meets their ability-level, piques their interest, fulfills Diploma requirements, and furthers their college/university admission and/or career objectives.

*Note: The above requirements may only be amended on an individual basis with approval from the Director.*