

The International Baccalaureate  
Diploma at Berlin British School



– Internationale Ergänzungsschule –

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## The International Baccalaureate Diploma at Berlin British School

The International Baccalaureate (IB) diploma is a two-year pre-university course designed to facilitate the international mobility of students and to promote international understanding. The comprehensive course of study for the IB diploma provides students with a balanced education that includes both breadth and depth of knowledge: It is internationally recognised as an academically demanding and thorough educational programme that enables students to enter the best universities all over the world.

The educational philosophy of the IB organization is found in its 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.*

At diploma level, the aim is to develop the individual talents and abilities of students by providing a challenging programme of study that combines intellectual rigour and high academic standards. There is also a strong emphasis on international understanding and responsible citizenship. The educational ideals of the IB are embodied in the 'learner profile' which summarises the qualities that the programme seeks to nurture. IB students 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 in-depth 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.

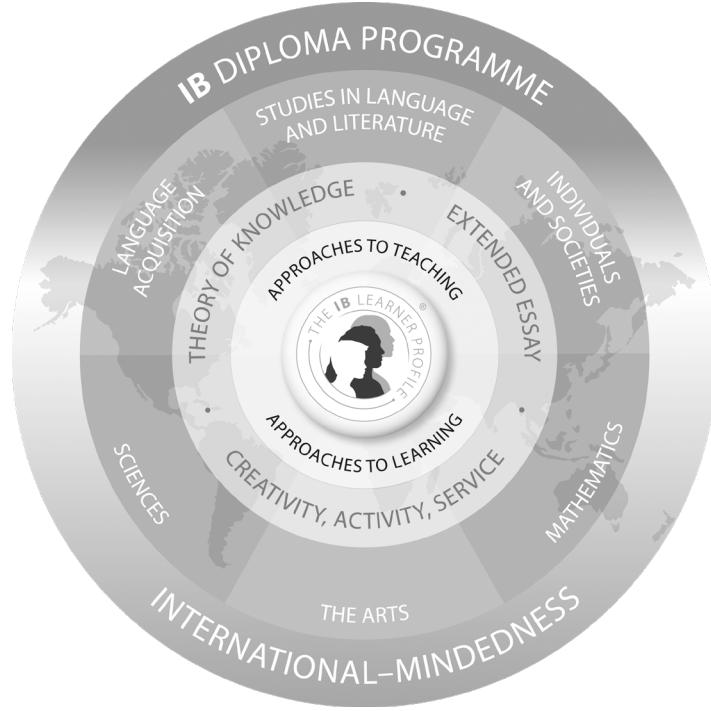
*Risk-takers:* They approach unfamiliar situations and uncertainty with courage and fore-thought, and have the independence of spirit to explore new roles, ideas and strategies. They are brave and articulate in defending their beliefs.

*Balanced:* They understand the importance of intellectual, physical and emotional balance to achieve personal well-being 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.

## 1 The IB Diploma Curriculum

The IB Diploma model provides a useful overview of the curriculum. At its centre is the ‘learner profile’ outlined above. The six groups from which students choose their subjects are represented as segments of model. Three subjects must be chosen at Higher Level, and three at Standard Level.



In addition, there are three ‘core’ requirements that aim to develop the ‘whole student’ and prepare them to take their place as fully rounded and developed global citizens who can think independently and are prepared for the challenges of university. Every IB diploma student is required to complete a Theory of Knowledge course, an extended essay and the creativity, action, service (CAS) component.

## 2 Core requirements

### 2.1 The Core – An Overview

The core elements of the IB programme could also be described as the heart of the programme. IB diploma students are expected to be socially engaged and aware of global issues. Consequently, the programme is designed to develop a range of academic skills, an open-minded outlook and an inquisitive, reflective and critical thinking approach to the world within the students whom undertake it. In addition to the six academic subjects that all students pursue, students must also undertake the ‘Core; which comprises of

the following components:

1. Creativity, Activity and Service
2. Theory of Knowledge
3. Extended Essay

## 2.2 Creativity, activity, service

This requirement encourages students to involve themselves in the wider world beyond the academic curriculum. They must commit at least 150 hours of their own time to the three course components and write a reflective diary, detailing what they have learnt from their experiences. ‘Creativity’ includes artistic pursuits (for example: drama, dance, and painting) as well as other activities that involve design and implementation. ‘Activity’ includes all sports and, in addition, expedition and project work. ‘Service’ covers any activity that contributes to the well-being of the community (for example, helping children learn to read, volunteer work for charities). It is expected that students will engage with some projects that cover more than one of these strands.

## 2.3 Theory of Knowledge

This compulsory course teaches students to think in a critical manner about knowledge issues and starts with the question ‘How do we know?’ Students follow a directed programme of reading, reflecting on how the different ‘ways of knowing’ (perception, language, reason and emotion) determine how we acquire knowledge of the world. Different ‘areas of knowledge’ (mathematics, natural sciences, human sciences, history, the arts and ethics) are then explored in the context of what constitutes knowledge in each area of study. Links are made with all other areas of the diploma course. Assessment is through a short presentation given by the student and a 1600-word essay on a knowledge issue.

## 2.4 Extended Essay

All diploma students must complete an extended essay of 4000 words on a topic of their choice. This component is an excellent preparation for the demands of university as students must undertake extensive independent research and follow the protocols of academic writing in their paper. Skills of analysis, synthesis, evaluation and reflection are refined during the process of the essay’s production, and support is provided by a supervisor who oversees the student’s work.

## 2.5 Bonus Points

Students are able to achieve up to 3 bonus points for their efforts in the Core.

CAS is graded on a ‘pass’ or ‘fail’ basis based upon the quality of their activities and subsequent reflections. Students must pass the CAS component to remain eligible for the full diploma.

The 3 additional bonus points are awarded based on the following matrix:

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## 3 The IB diploma grading system

The diploma is marked out of 45 points. Three ‘bonus’ marks are available for the Theory of Knowledge grade combined with the grade awarded for the extended essay. Each of the six subjects chosen is awarded a grade of between 1 and 7, according to the following criteria:

- » 1 very poor
- » 2 poor
- » 3 mediocre
- » 4 satisfactory
- » 5 good
- » 6 very good
- » 7 excellent

The IB diploma is awarded to students who attain at least 24 points and do not have any failing conditions, which include receiving a grade 1 in any subject; failing to score at least 12 points in the combined points total for the three Higher Level subjects studied; or failing to complete satisfactorily any of the core requirements.

## 4 Academic Honesty in the IBDP

IB Diploma students at BBS are expected to formally demonstrate academic honesty in their work. Students are required to acknowledge the work and ideas of others using formal academic referencing norms and comply with the school's Academic Honesty policy. Referencing expectations at BBS are outlined below.

### **Referencing/Citation**

The school uses 'Cite Me Right' by Richard Pears and Graham Shields as the key referencing guides. All IB students are expected to purchase a copy. Departments are encouraged to hold a reference copy in each classroom and 5-6 copies are held in the library. IBDP student will have several sessions over the course of the IBDP familiarise them with how to use this guide.

| <b>IB SUBJECT GROUP</b>                   |                      | <b>Exceptions</b>  |
|---|----------------------|--|
| <b>Group 1: Studies in L&amp;L</b>        | Harvard              |  |
| <b>Group 2: Language Acquisition</b>      | Harvard              |  |
| <b>Group 3: Individuals and Societies</b> | Harvard              | Students applying and using internal work as examples for Oxbridge/US applications may be encouraged to use an alternative referencing system, e.g. Chicago or Oxford (with teacher support) |
| <b>Group 4: Sciences</b>                  | Vancouver            |  |
| <b>Group 5: Mathematics</b>               | Harvard or Vancouver |  |
| <b>Group 6: The Arts</b>                  | Harvard              |  |

IBDP students are expected to sign a consent form to attest that all submissions are their own work and that all sources used have been acknowledged.

Copies of previous student work are stored to help identify malpractice.

Staff will hold a *vive-voce* with their supervisees once they have completed their Extended Essay. One of the purposes of this is to identify and confirm that this is the students' own work by discussing their understanding of their work, methodology and the findings. It is likely that students will also be required to engage in a similar process, where possible once they have completed their Internal Assessment work.

## 5 IB diploma curriculum subjects in Groups 1 to 6

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Each student must choose three subjects at Higher Level and three subjects at Standard Level. A Group 1 language must be chosen alongside another language: either another Language A or one of the options from Group 2. One option must then be chosen from Groups 3, 4 and 5. The sixth subject can be chosen from Groups 2, 3, 4, 5 or 6.

Group 1 - Studies in Language and Literature

A Language and Literature

English  
German  
Native language self-study (e.g. Russian, Korean)

Group 2 - Language Acquisition

Language B/Ab Initio

English  
French  
German (also Ab Ini)  
Spanish

Group 3 – Individuals and Societies

Economics  
Geography  
History

Group 4 – Experimental Sciences

Biology  
Chemistry  
Physics

Group 5 – Mathematics

Mathematics Higher Level  
Mathematics Standard Level  
Mathematical Studies (Standard Level)

Group 6 – The Arts

Music  
Visual Arts

## 6 IB Subject overviews

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### Group 1 – Studies in Language and Literature

#### 6.1 English A Language and Literature

#### 6.2 German A Language and Literature

#### 6. 3 Self-Study A Language and Literature

The school makes available the opportunity for students to study their native language on a school supported self-study basis. The outline for this course is identical to the English and German options, and students have in the past followed courses in languages such as Chichewan, Russian and Chinese.

#### *Aims and Objectives*

The A Language and Literature course is designed to develop students' critical awareness and appreciation of literary texts, as well as encourage them to approach non-fiction texts in an intelligent and informed fashion. Students develop and refine their ability to articulate a sensitive and perceptive response to texts in both oral and written form. They are also introduced to key critical and theoretical concepts that underpin the teaching of the subject.

#### *Curriculum*

In Part One of the course students explore language in a cultural context, considering such issues as gender, propaganda and sociolinguistics. In Part Two students study language and mass communication, exploring such topics as news coverage, advertising and censorship. In Part Three, students study a range of literary texts from different periods and cultures. Part Four focuses on textual analysis and skills of close reading with reference to selected literary works.

#### *Assessment*

50% of the course is assessed through essays, written tasks, oral presentations and commentaries undertaken during the two-year course. The remaining 50% is assessed through two terminal examinations, one of which is an essay paper on literary texts, and the other is a critical analysis of an unseen text. Students at Higher Level study a greater number of texts, complete more written tasks and are expected to show a more sophisticated level of analytical and expressive competence than their counter-parts at Standard Level.

## Group 2 – Language Acquisition

### 6.4 German, French and Spanish - Ab Initio (*subject availability*)

#### *Aims and Objectives*

The Ab Initio course, aimed at students with no previous knowledge of the language, lays emphasis on language acquisition and usage at an elementary, practical level. Over the two years students acquire and apply the four interrelated skills of speaking, listening, reading and writing. The course demands an awareness of the culture of the target language. Students should actively aim to extend their knowledge of cultural aspects of Germany, France or Spain while they reside here. Ab Initio is only available at Standard Level.

#### *Curriculum*

The syllabus includes topics under the seven broad headings of the person, education and careers, towns and services, eating and drinking, leisure and travelling, the environment, and illness and emergencies.

#### *Assessment*

Students are assessed both internally and externally. 30% of the IB Language Ab Initio course is internally assessed; this includes the two oral components i.e. the individual oral and the interactive oral. 70% of the course is an externally assessed examination, consisting of two papers. Paper 1 consists of text handling exercises based on four texts and a short writing exercise in response to the fourth text. Paper 2 consists of a short writing task and an extended writing task.

### 6.5 German, French and Spanish - Language B

#### *Aims and Objectives*

Language B is available at both Higher and Standard levels in English, French, German and Spanish. The Language B courses are aimed at students with some previous experience of the target language (at least 5 years) but are not native speakers of the language. The main focus of this course is to further develop language acquisition to a sophisticated level, especially at Higher Level.

#### *Curriculum*

There are three areas of study common to both SL and HL: communication and media, global issues, and social relationships. In addition, both SL and HL teachers select two from the following five options: cultural diversity, customs and traditions, health, leisure, and science and technology. At HL, students are required to read two literary works.

*Note that the curriculum for 2020 has changed.* The 5 new themes are: identities, experiences, human ingenuity, social organization, sharing the planet.

#### *Assessment*

Students are assessed both internally and externally. 30% of the IB Language B course is internally assessed; this includes the two oral components i.e. the individual oral and the interactive oral. 70% of the course is an externally assessed examination consisting of two Papers and a written assignment. Paper 1 is based on text handling exercises, and Paper 2 is essay writing.

From 2020:

Students are assessed both internally and externally. 25% of the IB Language B course is internally assessed; this includes one oral component. 75% of the course is an externally assessed examination consisting of two Papers. Paper 1 (25%) is written productive skills and Paper 2 (50%) is receptive skills: listening and reading comprehension

#### 6.6 English B – available at HL only

#### *Aims and Objectives*

English B is offered to students for whom English is not their native language, yet they have a very good grasp of English, and they are able to study either German or a self-study language as Language A. The main focus of this course is to further develop language acquisition to a sophisticated level. This course is only offered at higher level, as it is assumed that all participants will have a very secure level in English.

#### *Curriculum*

Similar to the other language B courses on offer, English B focuses on the following concepts: communication and media, global issues, and social relationships. Students will study two topics from the following five options: cultural diversity, customs and traditions, health, leisure, and science and technology. At HL, students are required to read two literary works.

*Note that the curriculum for 2020 has changed.* The 5 new themes are: identities, experiences, human ingenuity, social organization, sharing the planet.

#### *Assessment*

Students are assessed both internally and externally. 30% of the IB Language B course is internally assessed; this includes the two oral components i.e. the individual oral and the interactive oral. 70% of the course is an externally assessed examination consisting of two Papers and a written assignment. Paper 1 is based on text handling exercises, and Paper 2 is essay writing.

From 2020:

Students are assessed both internally and externally. 25% of the IB Language B course is internally assessed; this includes one oral component. 75% of the course is an externally assessed examination consisting of two Papers. Paper 1 (25%) is written productive skills and Paper 2 (50%) is receptive skills: listening and reading comprehension

Group 3 – Individuals and Societies

## 6.7 Geography

### *Aims and Objectives*

The Geography course embodies global and international awareness in several distinct ways. It examines key global issues, such as poverty, sustainability and climate change. It considers examples and detailed case studies at a variety of scales, from local to regional, national and international. Geography seeks to develop international understanding and foster a concern for global issues as well as to raise students' awareness of their own responsibility at a local level. The course also aims to develop values and attitudes that will help students reach a degree of personal commitment in trying to resolve these issues, and to appreciate our shared responsibility as citizens of an increasingly interconnected world.

### *Curriculum*

Students at Standard Level and Higher Level in Geography are presented with a syllabus that has a common core and optional themes. HL students also study the Higher Level core extension. The syllabus requires the development of certain skills, attributes and knowledge as described in the assessment objectives of the course. Although the skills and activity of studying Geography are common to both SL and HL students, the HL student is required to acquire a further body of knowledge, to demonstrate critical evaluation, and to synthesize the concepts in the Higher Level core extension. SL students study two optional themes; HL students study three optional themes, providing further breadth. HL students study the HL core extension, which focuses on global interactions; and examine, evaluate and synthesize the prescribed concepts, which by their nature are complex, contestable, interlinked and require holistic treatment. This provides further depth at HL.

### *Assessment*

The external assessment in Geography consists of two examination papers at SL and three at HL that are externally set and externally moderated. They are designed to allow students to demonstrate their competencies in relation to the Geography assessment objectives and specific parts of the Geography syllabus, namely the geographic skills, the core theme, the optional themes and, at HL, the Higher Level extension. The external components contribute 75% to the final assessment at SL and 80% at HL.

## 6.8 History

### *Aims and Objectives*

History is the process of recording, reconstructing and interpreting the past through the investigation of a variety of sources. It is a discipline that gives students an understanding of themselves and others in relation to the world, both past and present.

Students learn that the subject poses questions without providing definitive answers. In order to understand the past, they engage with both primary historical sources and the work of historians. Historical study involves the selection and interpretation of data and critical evaluation of it. Students of History will appreciate the relative nature of historical knowledge and understanding, as each generation reflects its own world and preoccupations and as more evidence emerges. A study of History requires and develops an individual's understanding of, and empathy for, people living in other periods and contexts.

### *Curriculum*

All students study two prescribed courses. First, the rise and rule of authoritarian single party states in two or more different regions of the world; this looks at the origins, ideology, form of government, organisation, nature and impact of these regimes. Second, the causes of and impact in Europe and Asia of the Cold War; this looks at East–West relations from 1945, and the international perspective and understanding of the origins, course and effects of the Cold War— including superpower rivalry and events in all areas affected by Cold War politics, such developing countries. HL students also study major trends in Europe from the end of the 19th century to the end of the 20th century. This includes revolutions; the decline of empires and the establishment of nation states; political, social and economic reforms; and the emergence of dictatorships and the re-emergence of democracy.

### *Assessment*

The external assessment in History consists of two examination papers at SL and three at HL that are externally set and externally moderated. They are designed to allow students to demonstrate their competencies in relation to the History assessment objectives and the topics covered in the History syllabus. The external components contribute 75% to the final assessment at SL and 80% at HL. There is also a research project of the student's choice, an opportunity to demonstrate skills in historical investigation and analysis.

## 6.9 Economics

### *Aims and Objectives*

The Economics course is designed to enable students to: develop an understanding of microeconomic and macroeconomic theories and concepts and their real-world application; develop an appreciation of the impact on individuals and societies of economic interactions between nations; develop an awareness of

development issues facing nations as they undergo the process of change.

### *Curriculum*

The syllabus consists of four main sections:

1. Microeconomics

Competitive markets: demand and supply, elasticity, government intervention.

2. Macroeconomics

Macroeconomic objectives, fiscal policy, monetary policy, supply-side policies

3. International Economics

International trade, exchange rates, the balance of payments, terms of trade

4. Development Economics

Measuring development, the role of international trade, the role of foreign aid and multilateral development assistance

There is an introduction to Economics in the first weeks of the course for students without prior knowledge, to introduce them to key concepts and ideas.

### *Assessment*

The course is assessed both externally and internally as outlined below:

| Standard Level   | Higher Level   |
|--|--|
| External Assessment (80%) <ul style="list-style-type: none"><li>• Paper 1: Extended response (40%)</li><li>• Paper 2: Data response (40%)</li></ul>  | External Assessment (80%) <ul style="list-style-type: none"><li>• Paper 1: Extended response (30%)</li><li>• Paper 2: Data response (30%)</li><li>• Paper 3: Extension paper (20%)</li></ul> |
| Internal assessment (20%)<br>Students produce a portfolio of three commentaries, based on different sections of the syllabus and on published extracts from the news media. Maximum 750 words for each commentary. |  |

## Group 4 - Experimental Sciences

### 6.10 Biology

#### *Aims and Objectives*

Biology aims to equip students with knowledge of human, plant and molecular biology, introducing them to key biological processes and concepts. Students also develop their laboratory-based skills by planning, carrying out and evaluating a range of investigations.

#### *Curriculum*

All students study a 'core' course that covers the following skills and topics: statistical analysis; cells; the chemistry of life; genetics; ecology and evolution; human health and physiology. Higher Level students also study the following in addition to the core: nucleic acids and proteins, cell respiration and photosynthesis; plant science. Furthermore, students study two options such as 'neurobiology and behaviour' and 'Ecology and conservation'.

#### *Assessment*

Students are assessed by an internally assessed set of laboratory reports on a variety of practical investigations (24%). Three written terminal examinations comprise the other 76% of the overall mark, and involve a multiple-choice paper, a second paper which assesses the core and extended topics in more detail, and an options paper.

### 6.11 Chemistry

#### *Aims and Objectives*

The Chemistry course is designed to help students become aware of how scientists work and communicate with each other by placing emphasis on making careful observations, asking questions, developing ideas, and testing hypotheses through practical and experimental exploration. Students also develop the skills necessary to form links between the different topics within Chemistry and are encouraged to think critically about scientific principles that affect their everyday lives.

#### *Curriculum*

In their first year, the students investigate topics such as Stoichiometry, Atomic Theory, Periodicity, Bonding, Energetics and Kinetics. Their second year includes the study of Equilibrium, Acids and Bases, Redox, and Organic Chemistry. The final part of the course consists of two 'optional' topics to be chosen by the teacher; the topics to be considered include Analytical Chemistry, Human Biochemistry, Industrial Chemistry, Medicines and Drugs, Environmental Chemistry, and Food Chemistry.

### *Assessment*

Internal assessment accounts for 24% of the final score and consists of an interdisciplinary project and in-class investigations with lab reports marked by the teacher. External assessment consists of three written papers and determines the other 76% of the final grade.

## 6.12 Physics

### *Aims and Objectives*

The Physics IB course aims to provide students with the opportunity for scientific study and creativity within a global context that stimulates and challenge students. As well as learning knowledge, methods and techniques that characterise science and technology, students also develop an ability to analyse, evaluate and synthesize scientific information. They also develop experimental and investigative scientific skills and develop and apply their information and communication technology skills in the study of the subject.

### *Curriculum*

Students at both Standard Level and Higher Level study eight core topics, including Mechanics, Thermal Physics, Oscillations and Waves, Electric Currents, Forces and Fields, Atomic and Nuclear Physics, and Energy and Climate Change. Additional Higher Level topics include Motion in Fields, Higher Thermal physics, Wave phenomena, Electromagnetic Induction and Digital Technology. Both levels also require the study of two options, for which a detailed study of Quantum Physics, Particle Physics and Relativity is undertaken.

### *Assessment*

The course is assessed through three examinations and a portfolio of Internal Assessment. The Internal Assessment contributes 24% towards the final grade, with the three examinations making up the other 76%. The two papers assess the core material for each of the two possible levels of study. One of these is a multiple-choice paper, the other a longer answer, extended paper. The third paper assesses the student's knowledge and problem solving ability in the options studied.

## Group 5 – Mathematics

### 6.13 Mathematical Studies - Standard Level

#### *Aims and Objectives*

The Mathematics Studies SL course ‘is designed to build confidence and encourage an appreciation of mathematics in students’ who do not expect mathematics to be a major component of their university studies. The students are encouraged to develop their logical, critical and creative thinking, in addition to building a sound grounding in all the key areas of mathematics. By the end of the course, students should be able to interpret a given problem in appropriate mathematical terms, and demonstrate an understanding of, and competence in, the practical applications of mathematics.

#### *Curriculum*

Students who pursue this subject receive an overview of a wide range of topics such as algebra, sets, probability, trigonometry and statistics, and undergo a brief introduction to calculus.

#### *Assessment*

The internal assessment for this course comprises 20% of the final mark and consists of a project that is ‘an individual piece of work involving the collection of information or the generation of measurement.’ The remaining 80% of the marks are made up from two one hour and a half papers, the first of which contains 15 short response questions and the second consists of 5 extended response questions.

### 6.14 Mathematics - Standard Level

#### *Aims and Objectives*

The Mathematics SL course is designed for mathematically competent students who already possess a sound knowledge of basic mathematical concepts and the application of mathematical techniques, as they prepare for future studies in subjects such as Chemistry, Economics, Psychology and Business Administration. An emphasis is placed on problem solving, mathematical modelling of real life problems, and developing an investigative mind. Technology also plays an important role.

#### *Curriculum*

Students receive in-depth treatment of polynomial functions and inequalities, exponents and logarithms, analytical geometry, advanced trigonometry, sequences and series, limits, and introductory calculus and its application to real life problems.

### *Assessment*

The internal assessment is composed of two portfolio projects, each worth 10% of the student's final mark (thus together they form 20% of the final mark). The first project is a mathematical investigation, often looking at number patterns and developing conjectures (which students will attempt to prove) that describe these patterns. In the second project students have to develop a mathematical model to describe accurately a given set of data. The external assessment comprises two 90 minute papers (each 40% of the overall mark), one of which can be taken with a calculator.

### 6.15 Mathematics – Higher Level

#### *Aims and Objectives*

This course caters for students who have a good background in mathematics and are highly competent in a range of analytical and technical skills, in particular algebraic manipulation. The majority of these students expect to include mathematics as a major component of their university studies, either as a subject in its own right or within courses such as physics, engineering and technology.

Students are encouraged to apply their mathematical knowledge to solving problems set in a variety of meaningful contexts. Development of each topic should feature justification and proof of results. Students embarking on this course 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. They should also be encouraged to develop the skills needed to continue their mathematical growth in other learning environments.

#### *Curriculum*

The Mathematics HL course is very challenging. Students who pursue this subject study a wide range of Core topics such as algebra, functions, trigonometry, vector geometry, matrices, statistics, probability and calculus. They must also study one optional topic from a choice of 'Further statistics and probability' 'Sets, relations, and groups', 'Series and differential equations' and 'Discrete Mathematics'.

### *Assessment*

The internal assessment is composed of two portfolio projects; each is worth 10% of the student's final mark (thus together they form 20% of the final mark). The first project is a mathematical investigation, often looking at number patterns, and developing conjectures (which students attempt to prove) that describe these patterns. In the second project students have to develop a mathematical model to describe accurately a given set of data. External assessment is comprised of three papers (one, with calculator, 30% of overall assessment), one without (30%) and an options paper (20 %).

## Group 6 – The Arts

### 6.16 Visual Arts (Options A and B)

#### *Aims and Objectives*

The course aims to encourage personal growth through studying and practising art. Students develop both their technical skills, and ability to respond in a sensitive and critical manner to art from a variety of cultures and contexts. Students' personal creativity and inventiveness are developed through trips to galleries, the production of personally relevant art works and exploration of ideas that reflect a cultural and historical awareness.

#### *Curriculum*

Students embark on a course of self-discovery and artistic exploration by undertaking research projects that encourage them to look for inspiration both from their own imaginative resources and the wealth of artistic traditions and movements. They experiment with a variety of different media, working towards a harmonious union of medium and idea.

#### *Assessment*

Option A – 60% studio work, externally assessed by final exhibition, candidate record booklet and interview. 40% investigation workbook, which is internally assessed.

Option B – 60% investigation workbook, externally assessed, candidate record booklet and interview. 40% studio work, which is internally assessed.

## 6.17 Music

#### *Aims and Objectives*

The Curriculum is designed to give students the opportunity to prepare for lifelong engagement with music; to become informed, reflective and critical musicians; to understand the exciting and changing face of music; to explore music across time, place and culture; to express their own ideas with confidence and flair; to develop listening and arguing skills; and to deepen their knowledge and develop their potential as musicians, personally and collaboratively.

#### *Curriculum*

Higher Level Music is for a student who will reach Grade VI or above on an instrument or voice during the course, is interested in composition, and expects to keep their music going in some way for the rest of their lives. The curriculum covers composition, performance, musical perception, and analysis. Standard level is for the student who loves music, perhaps plays in a rock band, or creates remixes at home in a

virtual studio. Students at both levels study musical perception and analysis, but at SL the student may choose between composition, solo performing or group performing.

#### *Assessment*

Composition is internally assessed. Students at HL submit a Portfolio of three pieces (25%). If they choose composition at SL they submit a Portfolio of two pieces (50%). There are no restrictions of style, and a range of options taken from free, electronic, improvised and more traditional forms. Compositions may be as long as they need to be, within a few rough guidelines.

Performance is also internally assessed. Students at HL give a recital of between 20 and 25 minutes in length, usually towards the end of the course (25%). At SL, if the student chooses performing, the recital is shorter, and worth more (50%). It's important that the chosen repertory is well-suited to the student's gifts and abilities, and that it shows a range of styles.

Musical Perception and Analysis are externally assessed. The Listening Paper is a timed exam consisting of essay questions about set works, and open questions about music from Western (older and more recent) and Non-Western traditions (30%). The Musical Links Investigation is an extended piece of writing - a media script - comparing two pieces of music from widely differing musical cultures (20%). As you can choose the music you write about, this often turns out to be a rewarding part of the course.

Useful websites:

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[www.ibo.org](http://www.ibo.org) ---- the IB official website

