



# IB Diploma Programme Course Selection Guide

2015



# **TASHKENT INTERNATIONAL SCHOOL**

## **IB DIPLOMA PROGRAMME SUBJECT CHOICES**

***IB Diploma candidates choose 6 subjects to study over 2 years according to the following requirements:***

- *One subject must be selected from each of the IB subject groups 1 to 5 indicated in the Diploma Programme model above.*
- *The only exception is group 2 as a student may choose a second language in group 1 instead of a group 2 language. Successful completion of two group 1 courses can lead to the award of a bilingual diploma.*
- *As a sixth subject, the student may either select an Arts subject or a second subject from Groups 1-4.*
- *Three subjects are chosen at higher level and three at standard level.*
- *Admission in all classes eventually will have to be validated by grade 10 subject teachers and/or DP subject teachers.*
- *All students must study English and another language either from group 1 or 2.*
- *Students have the option of studying another language A not offered by the school with a tutor but this will entail additional costs for a parent hired tutor.*

*All subjects and combinations listed below may not be available. Final course offerings depend on the number of students that sign up for a subject as well as scheduling and staffing constraints.*

## **Group 1: ENGLISH A: Literature**

## **Higher and Standard**

The English A: Literature programme is a very rigorous literature course usually studied at the first language level of the student. It encourages the development of an appreciation of literature and the knowledge of a variety of cultures and societies through discussion and analysis of literature, responding both formally and creatively. Because the programme does not limit the study of literature to the achievements of one culture by encouraging the study of literature translated from another language into English, the students are able to gain a broad, international perspective of literature from cultures other than English-speaking cultures.

### **Difference between higher and standard level**

Number of works to be read and analysed: 13 (HL) and 10 (SL)

Oral Commentary: at HL this is followed by an assessed discussion

### **Course Content**

In addition to learning how to analyse poetry and prose, there is a very demanding syllabus of 13 works (10 for SL) to be studied throughout the two years.

This course is designed to cover various genres, literary eras, major poets, writers and playwrights, a variety of regions and some books translated from other languages into English. Some works are chosen from a Prescribed Book List compiled by IB and others are the school's free choice. This results in a balanced programme of "classics" and more recent works, lending itself to representing a broad range of styles, cultures and preferences.

Once these works have been read and analysed, students are required to respond to them both orally and in writing. There are two oral assessments, one formal essay and an examination essay.

### **Assessment Details**

External exams consist of an Unseen Commentary on a poem or a piece of prose and a Formal Literary Analysis essay (2 papers). During the two-year period, students are expected to produce one formal piece of writing based on their World Literature works. This is externally assessed.

There are also two oral requirements: one is a formal oral commentary and the other is an interactive oral presentation.

*Oral assessments are recorded and assessed by the teacher, then sent to the IB for moderation.*

### **Prerequisites and special requirements**

The candidate should be proficient at an advanced level of English through most of their prior education.

### **Who should choose this course?**

- Students who are native speakers or have advanced English language proficiency
- Students who enjoy reading and who are able to write academic essays

### **Who should not choose this course?**

- Students who do not have advanced English skills with native fluency
- Students who do not like reading in English
- Students who are not strong in terms of English language literary analysis
- Students who do not have strong essay-writing techniques in English

### **Reference:**

International Baccalaureate, [Diploma Programme Language A Literature Guide](#). Cardiff, United Kingdom: International Baccalaureate, 2011.

## **Group 1: ENGLISH A: Language & Literature** **Higher & Standard**

English A: Language and Literature is a course designed for students who have experience of using English in an academic context. Texts, both literary and non-literary, are studied according to form, content, purpose and audience as well as the social, historical and cultural context in which they were created.

### **Difference between higher and standard level**

All students study four options in the course of 2 years. The content of each option is greater for HL students; they are assessed using different criteria requiring higher levels of achievement and they sit different external exam papers which are longer than standard level, and have less guidance contained in them. For Paper 1 HL students are required to tackle a comparative analysis of a pair of texts, one of which is literary, whereas SL students analyse one non-literary text.

### **Course content**

Students study 4 options over the two years, 2 based on literary texts (HL–6 texts, SL–4 texts) and 2 based on a cultural study of a variety of authentic texts from real life: Language in a cultural context and language and mass communication.

### **Assessment details**

Assessment consists of a variety of internally and externally assessed work as follows:

	<i>Higher level</i>	<i>Standard level</i>
<i>External</i>		
Paper 1: Commentary	2 hours; 25%	1 ½ hours; 25%
Paper 2: Essay	2 hours; 25%	1 ½ hours; 25%
Written Tasks*	20%	20%
<i>Internal</i>		
Interactive oral	15%	15%
Individual oral	15%	15%

*Oral assessments are recorded and assessed by the teacher, then sent to the IB for moderation.*

\* At HL 4 Written Tasks must be completed of which 2 are externally assessed.

\* At SL 3 Written Tasks must be completed of which 1 is externally assessed.

### **Prerequisites and special requirements**

Students must have an initial proficiency in English to be successful in this course as determined by the school and language teachers.

### **Who should choose this course?**

The language background of the students enrolling on this course is likely to vary considerably – from monolingual students to students with more complex language profiles. This course is appropriate for students planning to study in Universities where English is the language of instruction.

### **Who should not choose this course?**

Students planning to study English Literature in university may be better prepared by the English A: Literature course.

#### **Reference:**

International Baccalaureate, Diploma Programme Language A: Language and Literature Guide. Cardiff, United Kingdom: International Baccalaureate, 2011.

## **Group 1: KOREAN A: Literature**

## **Higher and Standard**

한국어 문학 A: 한국어 문학 프로그램은 모국어를 수준 높게 구사하는 학생들을 위한 과정으로 매우 정교하고 세밀하게 짜여진 프로그램입니다. 한국어 문학에서는 다양한 토론을 통해 사회와 문화 및 문학을 이해하고 창조적인 방식으로 반응하는 방법을 익히는 한편, 문학 분석 지식과 문학 감상 능력을 발달시키기 위한 과정이 준비되어 있습니다. 또한 한국어로 번역된 세계 문학을 연구함으로써 한국 문학 뿐 아니라 다른 나라 문학을 통해 여러 나라의 문화와 사회를 이해하며 국제적인 시각을 갖게 됩니다.

### **Difference between higher and standard level**

하이레벨과 스펀다드 레벨 과정의 차이점:하이레벨 과정은 열 세 작품(13 :HL) ,스텐다드 레벨 과정은 열 작품(10 :SL) 을 배웁니다.

### **Course Content**

한국어 문학 프로그램 안내입니다. 2년 동안13 작품 (SL 10)을 분석하는 방법을 익힙니다. 엄격한 과정을 통해 문학장르, 작품의 시대 배경, 주요 시인, 작가 및 극작가, 등 다양한 작품을 선택해 한국어로 번역 된 문학작품을 학습하도록 설계 되었습니다. 작품 선택은 IB도서 목록에서 선택 해야 하는 것과 자유롭게 선택할 수 있는 방법이 있습니다. 고전문학과 최근의 작품, 다양한 스타일, 문화 및 환경을 알 수 있도록 균형잡힌 문학작품을 학습한 후에 분석하기, 효과적으로 전달하기, 에세이 작성하기를 완료합니다

### **Assessment Details**

평가 방법 안내입니다. 시 또는 산문 중 하나를 선택해 작품을 분석하는 시험과 이미 학습한 작품을 형식에 맞게 분석하는 두 가지 시험을 치르게 됩니다(2 paper). 그리고 학생들은 세계 문학 작품을 토대로 형식이 갖추어진 에세이를 작성하며 에세이 평가는 외부에서 합니다.

말하기 평가 안내입니다. 효과적인 발표 능력과 형식을 갖추어 작품을 분석하는 평가가 두 번 있습니다. 음성 언어를 통해 작품 분석 능력을 평가하며 녹음 된 자료는 IB에 전송 됩니다 외부에서 평가합니다.

### **Prerequisites and special requirements**

학생들이 평가를 완료하기 위해 수준높은 언어 실력을 반드시 습득해야 합니다.

### **Who should choose this course?**

- 한국어 문학 수업을 들을 수 있는 학생은 다음과 같습니다.
- 모국어 수준의 한국어 구사능력을 갖추어야 합니다
- 수준높은 독서와 학술에세이를 쓸 수 있는 능력을 갖추어야 합니다.

### **Who should not choose this course?**

- 모국어 수준의 한국어 구사 능력이 없고 수준높은 독서능력과 학술에세이를 쓸 능력이 없는학생은 이 수업을 들을 수 없습니다.

**Reference:** International Baccalaureate, Diploma Programme Language A Literature Guide. Cardiff, United Kingdom: International Baccalaureate, 2011.

### **Group 1: Русский язык А: литература.** Продвинутый и стандартный уровень.

Русский язык А: литература – это литературный курс, направленный на развитие приемов литературного анализа и формирование способности высказывать независимые литературные суждения. Изучение истории родной литературы способствует развитию устных и письменных навыков владения русским языком. Изучение литературы предполагает оригинальное, критическое мышление, формирует творческую личность с развитым воображением.

Предлагаемый курс не ограничивается рассмотрением русской культуры и литературы. Изучение текстов литературных произведений зарубежных авторов позволяет сформировать глобальный взгляд на общечеловеческие проблемы.

#### **Цели курса:**

- Сформировать личностный подход к литературе и развить навыки литературного анализа
- Познакомить студентов с разнообразными литературными произведениями, относящимися к различным периодам, жанрам и стилям
- Расширить кругозор студентов за счёт изучения литературных произведений других культур
- Показать студентам различные подходы к изучению литературы, познакомить с техниками литературного анализа

#### **Различия между продвинутым и стандартным уровнем**

##### **Продвинутый уровень**

- Общее число изучаемых произведений: 13 (3 произведения мировой литературы)
- Внутренняя проверка. Устный компонент – индивидуальный устный комментарий и обсуждение (20 минут)

##### **Стандартный уровень:**

- Общее число изучаемых произведений: 10 (2 произведения мировой литературы)
- Внутренняя проверка. Устный компонент - индивидуальный устный комментарий (10 минут)

#### **Содержание курса:**

	<b>Продвинутый уровень</b>	<b>Стандартный уровень</b>
Часть 1. Произведения в переводе:	3 произведения	2 произведения
Часть 2. Детальное изучение:	3 произведения	2 произведения
Часть 3. Литературные жанры:	4 произведения	3 произведения
Часть 4. Школьный выбор:	3 произведения	3 произведения

#### **Система оценки:**

##### **I. Внешняя проверка (70%)**

Комментарий/анализ	20%
Эссе	25%
Письменное задание	25%

##### **II. Внутренняя проверка (30%)**

###### **Устный компонент**

Индивидуальный устный комментарий	15%
Индивидуальная устная презентация	15%

#### **На кого рассчитан данный курс?**

Курс литературы предполагает, что студент свободно понимает произведения художественной литературы, написанные на русском языке, и имеет определенные навыки анализа литературного текста.

#### **Кому не следует выбирать данный курс?**

Студентам, которые плохо понимают художественную литературу на русском языке.

**Reference:** International Baccalaureate, Diploma Programme Language A: literature guide. Switzerland: International Baccalaureate. Published February 2011. Updated February 2011, November 2011, August 2012 and August 2013 Geneva.

## Group 2: LANGUAGE *ab initio*

## Standard Level only

### *Beginners' Russian*

The main focus of the Language *ab initio* course is on the acquisition of language required for purposes and situations usual in everyday social interaction (communication through the use of language). This course aims to develop a variety of linguistic skills, and a basic awareness of the culture through the use of the target language. Language *ab initio* courses encourage students to practice the five language skills of listening, speaking, reading, writing and interaction. Language learning takes place in variety of ways and through a range of different media.

IB Language *ab initio* courses aim for students to learn to:

- understand and use the language in a range of contexts for a variety of purposes;
- use the language to communicate with other people;
- develop skills in listening, speaking, writing and reading;
- use the language to interact with and appreciate another culture

### Course content

The course is organized around the three themes which are: ***Individuals and society, Leisure and work, Urban and rural environment*** which are divided into 20 topics (Daily routines, Education, Food and drink, Personal details, appearance and character, Physical health, Relationships, Shopping; Employment, Entertainment, Holidays, Media, Sport, Technology, Transport; Environmental concerns, Global issues, Neighborhood, Physical geography, Town and services, Weather).

These themes and topics are studied through three areas of study:

1. Language
  - the four primary language skills (listening, speaking, reading, writing)
  - grammatical structures
  - vocabulary
2. Texts (as many types as possible)
3. Cultural awareness – exploring aspects of the culture related to the language studied

### Assessment details

External Assessment: Written Component (75%)

Examination Paper 1: Receptive skills	30%
Examination Paper 2: Productive skills	25%
Written assignment: 200–350 words written in the target language.	20%

Internal Assessment: Oral Component (25%)

Individual Oral (Presentation followed by questions and conversation)	25%
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*Oral assessments are recorded, assessed by the teacher and sent to an IB examiner for moderation.*

### Prerequisites and special requirements

Given the intense nature of Language *ab initio* courses, students will need to demonstrate good language learning skills or limited exposure to the language previous to taking the class.

### Who should choose this course?

Language *ab initio* is appropriate for students with none to less than two years of experience in the target language. While previous exposure to the language may be helpful, it is not mandatory. Russian is a particularly useful class for learning language survival skills for travel or getting around Tashkent.

### Who should not choose this course?

Students should not take a language *ab initio* course in a language for which they have had 2 or more years of study or life experience.

**Reference:** International Baccalaureate Organization, Diploma Programme Language *ab initio* guide. Cardiff, United Kingdom: International Baccalaureate Organization, Published March 2011, Updated August 2013.

## **Group 2: LANGUAGE B** **Intermediate Russian and French**

## **Higher and Standard Level**

The focus of Language B is for intermediate to advanced language acquisition and to build intercultural understanding. Language B is intended for students with approximately 2-5 years of previous experience in the target language. Students are given the opportunity to reach a high degree of competence in a language, including the reading of literature at the higher level.

### **Difference between higher and standard level**

There is a common syllabus at SL and HL with literature as an additional component of the HL course. The differences between levels are determined by the depth and breadth of syllabus coverage, the assessment details, the assessment criteria, literature coverage and teaching hours. At SL the minimum prescribed number of hours is 150 and at HL it is 240 hours.

### **Course content**

At both higher level and standard level, a successful language B student should not only learn and assimilate basic language structures but should also be able to use the language in a range of situations and purposes for which and in which the language is used. These situations extend to the domains of work, social relationships and the discussion of abstract ideas at higher level.

- **The core**—consists of **three** areas of required study: Communication and media, Global issues, Social relationships.
- **Options**—teachers select **two** from the following **five** options: Cultural diversity, Customs and traditions, Health, Leisure, Science and technology
- **Higher Level**— students read **two** works of literature.

### **Assessment details**

External Assessment: Written Component (70%)

Examination Paper 1: Receptive skills 25%

Examination Paper 2: Written Productive skills 25%

Written assignment (200–300 words under classroom supervision) 20%

Internal Assessment: Oral Component (30%)

Individual Oral (Presentation followed by questions and conversation) 20%

Interactive Orals (3 classroom assessment activities set by the teacher) 10%

*Oral assessments are recorded and assessed by the teacher, then sent to the IB for moderation.*

### **Prerequisites and special requirements**

Given the intense nature of Language B courses, students will need to demonstrate good language learning skills. For standard level 2-3 years and for higher level 4-5 years of previous study in the language is the norm. Students should also interact regularly with native speakers of the language to build their language skills. The final decision on the appropriateness of the course and level of study are made by the relevant teacher together with the DP Coordinator.

### **Who should choose this course?**

The higher level course is particularly useful for students intending to study the language for a future career or for university study. Language B standard level may also be appropriate for students who have had social exposure to the language, are quick with languages and used to interacting with people speaking in the language of that country.

### **Who should not choose this course?**

Students who are new to the language and have had no previous experience with the language should not take this class. This is also not a class for students who are fluent in the language and have studied previously in schools where the target language was the language of instruction.

### **Reference:**

International Baccalaureate, Diploma Programme Language B Guide. Cardiff, United Kingdom: International Baccalaureate. Published March 2011, Updated September 2013.



## Group 3: ECONOMICS

## Higher and Standard Level

How many times in the course of your daily routine have you felt the need for more time to spend with friends, the need for more money to buy music or a meal at a fancy restaurant? If your allowance was doubled would the money be enough? Three times of your present allowance? Four times? Suppose there were 48 hours in a day, would that really give you enough time to spend with friends and do all the things that you want to do? The answer to these questions is likely to be NO. Well, this *scarcity* of resources (time and money, in this case) is what economics is all about. Since you don't have money to buy all the things that you want, you need to prioritize and choose those that give you the most satisfaction. Economics is all about enabling you make these *choices*. It gives us the tools and techniques that we need to make, as economists say, *rational choices*. Welcome then, to the world of scarcity and choice and the need to *economise* on the use of resources.

### Difference between higher and standard level

All units consist of HL and SL topics. In most cases, HL units are an extension of common themes. However, there is a greater degree of mathematical analysis of economic theory in the higher level components.

### Course content

As a discipline, economics is a social science and we will draw on many of the ideas and concepts that you would have learnt in humanities, for instance. Economists also use a lot of mathematical logic in formulating and using economic theories, particularly graphing techniques. As all economic ideas also need to be expressed in words using intuitive logic and real world examples, your ability to communicate effectively in English is also important.

There are 4 broad themes in the economics curriculum:

1. Microeconomics
2. Macroeconomics
3. International economics
4. Development economics

Development economics is a common thread running through all the above units.

### Assessment details

The final assessment will comprise of both external and internal components as per the following:

Exam Paper	Format	Time (hours)		Weighting (%)	
		SL	HL	SL	HL
1	Extended response	1.5	1.5	40	30
2	Data response	1.5	1.5	40	30
3	HL only - problem solving using simple math in Economics	--	1	--	20
<b>Internal Assessment (3 commentaries) externally moderated</b>				20	20

### Pre-requisites and special requirements

If your grade in humanities and math is less than a 4, it will not be feasible for you to choose IB economics. It is advisable that to sign up at higher level, you should do either Math SL or HL.

### Who should choose this course?

DP Economics is an academically rigorous programme which demands a range of skills from simple mathematics to essay writing along with regular work and commitment. Once you do that it can also be very rewarding both in terms of higher grades and an understanding of the world around you.

### Who should not choose this course?

Economics is not an easy option. Please don't join if you cannot commit yourself to regular work.

### Reference:

International Baccalaureate, [Diploma Programme Economics Guide November 2010](#). Geneva, Switzerland: International Baccalaureate, 2010.

Geography is about the real world; the interactions between individuals, communities and the physical environment. It examines the processes and the response involved, and evaluates management strategies of the resulting changes. Geography helps us recognise and understand the intriguing similarities and the differences we see around us every day.

### **Difference between higher and standard level**

While the depth of study is similar, the standard level syllabus is not as broad. Students will study the core theme and an additional two optional themes. Standard level students are expected to cover the same skills as higher level students.

### **Course content**

The core theme – “Patterns and Change” examines population, wealth and development, environment quality and sustainability, and resource management. There are several optional themes from which to choose, but considering our location, “Freshwater – issues and conflicts”; “Extreme environments – deserts and mountains”; and “Geography of food” and “Urban Environments” appear to be most suitable. A written report of a field study is also required. HL students focus on an additional theme – “Global Interactions”.

### **Assessment details**

In-school assessment will be principally through practice exam papers and essays, student presentations, short quizzes, mini-projects, case studies and lots of classroom discussion about various issues.

IB External Assessment

Exam Paper 1: Short and extended question on the core

Exam Paper 2: Two (SL) and three (HL) extended questions on optional themes

Exam Paper 3: Two essay questions (HL only)

IB Internal Assessment: Field study written report

### **Prerequisites and special requirements**

A strong interest in the world around us is the only real prerequisite.

### **Who should choose this course?**

Geography is a great foundation for those interested in studying subjects as diverse as International Relations, World Development, Environmental Studies, Geology, Hydrology, Archaeology, or City Planning. Geographers work for governments, environmental agencies, charities and NGO's; there are geographers on top of mountains, on reefs, in rivers, on volcanoes, in refugee camps, in rainforests, in the Antarctic and under the ocean. If you want to know what is out there and why, if you like getting your hands dirty - this is the course for you.

### **Who should not choose this course?**

Do not choose this course if you think it will be an easy option. There is much to read, to analysis, to write. There are statistics, tables and graphs to draw and understand; maps to create and interpret; satellite images to comprehend. If you are reluctant to read and research on your own time, if you have never listened to a daily news broadcast or read a newspaper or journal, this may not be the course for you.

### **Reference:**

International Baccalaureate Organization, [Diploma Programme Geography Guide](#). Cardiff, United Kingdom: International Baccalaureate Organization, 2009

## **Group 3: HISTORY**

## **Higher and Standard Level**

### **European Option**

The aim of the IB History Course is to cover approximately 100 years of content and teach the skills necessary for not only a Historian but for an enlightened international citizen. This includes not only analysis of primary and secondary sources for bias but also the art of the analytical essay. Writing is thought made visible and making one's thoughts known in a clear manner is a large part of IB History.

### **Difference between higher and standard level**

There are few differences between the Higher and Standard level courses but those few are fairly important. At TIS we teach the same content to both groups although it is possible that the SL students will occasionally be released to work on their other HL courses. However the HL students have a third exam paper that requires the student to write 3 essays in quick succession over a 2 ½ hour time block.

### **Course content**

Alexander II and the Emancipation of the Serfs, Russian Foreign Policy in the 19<sup>th</sup> C, Unification of Germany and Bismarck, Causes of WWI, The Russian Revolution and Civil War, Treaty of Versailles, League of Nations, Weimar Germany, Rise of the Dictators: Stalin and Hitler, Causes of WW II, the Japanese in invasion of China, Beginnings of the Cold War, The Korean Civil War and then either Mao and the Communist Revolution or Castro in Cuba.(Time depending on the last 2 – 3 topics)

### **Assessment details**

Assessment will be principally through practice Exam papers and Essays but there will also be Power Point Presentations, Short Quizzes, Posters, mini-projects and lots of classroom discussion about various readings.

	<b>SL % of grade</b>	<b>HL % of grade</b>
Exam Paper 1: Questions on 5 different sources. (1 hour)	30	20
Exam Paper 2: Two essay questions. (1 ½ hours)	45	25
Exam Paper 3: Three essay questions. (2 ½ hours)	-----	35
Internal Assessment	25	20

*Internal Assessment is a piece of original research between 1,500-2,000 words in length.*

### **Prerequisites and special requirements**

IB History is a reading and writing intensive course. Brilliance in English is however not necessary; the IB does not grade the English but the argument.

### **Who should choose this course?**

Why study History? The study of History requires solid analytical skills and the ability to present information in a competent manner. If you are planning to study International Relations, Development, Political Science, Journalism, Government or Law, IB History would be useful.

### **Who should not choose this course?**

History is not a course for the Laissez-faire. If you are reluctant to read and take notes outside of class, this is probably not the class for you. If however you love the study of bizarre personalities and the cut and thrust of dialectic you should think about taking History.

*"History is strewn thick with evidence that a truth is not hard to kill, but a lie, well told, is immortal."*

Mark Twain (1835-1910)

*"Historians are prophets with their face turned backward."*

Johann Friedrich Von Schiller (1759-1805) German dramatist, poet and historian

### **Reference:**

International Baccalaureate Organization, Diploma Programme History Guide. Cardiff, United Kingdom: International Baccalaureate Organization, 2008.

## Group 4: **BIOLOGY**

## **Higher and Standard Level**

Biology is the scientific study of the interactions that take place within and between living organisms and their chemical and physical environments. IB Biology in comparison to other IB science courses requires a larger amount of knowledge and statistical analysis to be learned. Do not think this is a math easy option. The emphasis however, is for students to acquire the relevant knowledge to gain a broad understanding of the key principles of biological systems. The major themes emphasized throughout IB Biology include, the relationships between *Structure and Function*, *Universality versus Diversity*, *Equilibrium within Systems* and *Evolution*. All IB science courses have a strong emphasis on experimentation and the scientific method as a way of gaining knowledge and understanding.

### **Difference between higher and standard Level**

The main differences between Higher Level (HL) and Standard Level (SL) Biology have to do with the time spent in study and the depth to which material must be learned.

### **Course Content**

Core Topics for SL and HL	Hours	Additional Topics for HL (AHL)	Hours
1: Cell biology	15	7: Nucleic Acids	9
2: Molecular biology	21	8: Metabolism, cell respiration and photosynthesis	14
3: Genetics	15	9: Plant biology	11
4: Ecology	12	10: Genetics and evolution	13
5: Evolution and biodiversity	12	11: Animal physiology	8
6: Human physiology	20		16
Extended Study Option C: Ecology and conservation	15	Extended Study Option C: Ecology and conservation	25
Practical Work	40	Practical Work	60
Minimum Teaching Hours	150	Minimum Teaching Hours	240

### **Prerequisites and Special Requirements**

A good background in 9<sup>th</sup>-10<sup>th</sup> grade biology, chemistry, physics and mathematics is recommended for IB Biology. HL candidates should have earned a grade of 5 or better in their previous biology course. ***An ecology trip working outdoors in sun and rain is a requirement for this course.***

### **Who should choose this course?**

HL Biology is recommended for students who wish to study biological sciences in university including medicine, nursing, pharmacy, biotechnology, genetic engineering, agriculture, forestry, conservation and environmental protection. SL Biology is recommended for students who may not plan to specialize in sciences in university but enjoy the challenges of learning about the living world and the way we need to interact with it responsibly in our daily lives and business.

### **Who should not choose this course?**

IB Biology should not be considered an easy science option. It involves a lot of writing, reading, complicated vocabulary, biochemistry, abstract concepts and mathematics (statistical analysis).

**Reference:** International Baccalaureate, Diploma Programme Biology Guide. Cardiff, United Kingdom: International Baccalaureate, 2014

## Group 4: CHEMISTRY

## Higher and Standard Level

In IB Chemistry, the theoretical study of chemistry is combined with the acquisition of practical, investigational, and communication technology skills. Moral, ethical, social, economic and environmental implications of using science and technology are also considered.

### Difference between higher and standard Level

The skills and activities are common to students at both SL and HL, however students at HL are required to study some topics in greater depth. (See below.) SL students participate in 40 hours of practical work; 60 hours of practical work is required for HL students.

### Course Content

Students study the topics shown below. One Optional Topic is also chosen from Biochemistry, Medicinal Chemistry, Materials, and Energy according to class interest.

SL and HL students study:	HL students study:
Topic 1: Stoichiometric relationships	
Topic 2: Atomic structure	Topic 12: Atomic structure
Topic 3: Periodicity	Topic 13: The periodic table—the transition metals
Topic 4: Chemical bonding and structure	Topic 14: Chemical bonding and structure
Topic 5: Energetics/thermochemistry	Topic 15: Energetics/thermochemistry
Topic 6: Chemical kinetics	Topic 16: Chemical kinetics
Topic 7: Equilibrium	Topic 17: Equilibrium
Topic 8: Acids and bases	Topic 18: Acids and bases
Topic 9: Redox processes	Topic 19: Redox processes
Topic 10: Organic chemistry	Topic 20: Organic chemistry
Topic 11: Measurement and data processing	Topic 21: Measurement and Analysis

### Assessment Details

*Paper 1:* multiple-choice questions.

*Paper 2:* short-answer and extended-response questions that may involve explanations, calculations, analysis or evaluation.

*Paper 3:* assesses experimental techniques in Section A and the content of the the chosen option in Section B.

*Internal Assessment (IA):* The internal assessment, worth 20% of the final assessment, consists of one scientific investigation. The individual investigation should cover a topic that is commensurate with the level of the course of study.

### Prerequisites and Special Requirements

The completion of two semester-long courses in introductory chemistry (or the equivalent) is recommended. Concurrent enrollment in HL Mathematics or Mathematics Standard Level is recommended for HL students.

### Who should choose this course?

IB Chemistry is recommended for students who plan to study science-related subjects such as medicine, biological science or environmental science at university. Those who wish to pursue a career in engineering are also recommended to study IB Chemistry. Students who have enjoyed studying introductory chemistry or those who wish to have a better understanding of the physical world may also want to choose IB Chemistry as their Group 4 science.

**Reference:** International Baccalaureate, Diploma Programme Chemistry Guide. Cardiff, United Kingdom: International Baccalaureate, 2014.

## Group 4: PHYSICS

## Higher and Standard Level

The Diploma Programme physics course allows students to develop traditional practical skills and techniques and to increase facility in the use of mathematics, which is the language of physics. It also allows students to develop interpersonal skills, and information and communication technology skills, which are essential in modern scientific endeavor and are important life-enhancing, transferable skills in their own right.

### Difference between higher and standard Level

Students at HL are required to study some topics in greater depth, to study additional topics and to study extension material of a more demanding nature than in the common options. The distinction between SL and HL is one of breadth and depth.

### Course Content

8 Core topics mandatory for SL and HL: Measurements and uncertainties, Mechanics, Thermal physics, Waves, Electricity and magnetism, Circular motion and gravitation, Atomic, nuclear and particle physics, Energy production.

Additional HL only topics: Wave phenomena, Fields, Electromagnetic induction, Quantum physics and nuclear physics.

Options: students must study one of the following options: Relativity, Engineering physics, Imaging or Astrophysics.

### Assessment Details

#### Standard Level

Paper 1	20% of the grade	Multiple Choice Paper
Paper 2	40% of the grade	Extended response on core topics
Paper 3	20% of the grade	Extended response on the option topics
Internal Assessment	20% of the grade	Covers objectives 1, 2, 3 and 4

#### Higher Level

Paper 1	20% of the grade	Multiple Choice Paper
Paper 2	36% of the grade	Extended response on core topics
Paper 3	24% of the grade	Extended response on the option topics
Internal Assessment	20% of the grade	Covers objectives 1, 2, 3 and 4

### Prerequisites and Special Requirements

A passing score in 10<sup>th</sup> grade physics (or similar level science course) will enable any student to study DP Physics at the Standard Level. Higher Level candidates should have a 5 or better in 10<sup>th</sup> grade physics.

#### Who should choose this course?

- You are curious about the physical world around you.
- You enjoy exploring the way things work.
- You like to take things apart, look inside and play with physical objects.
- You are interested in a career in Engineering, Physics, or another technical field.

#### Who should not choose this course?

Students who struggle with algebraic manipulations will struggle with the mathematical demands of this course.

**Reference:** International Baccalaureate, Diploma Programme Physics Guide. Cardiff, United Kingdom: International Baccalaureate, 2014.

## **Group 5: MATHEMATICAL STUDIES**

## **Standard Level**

This course is available at SL only. It caters for students with varied backgrounds and abilities. More specifically, it is designed to build confidence and encourage an appreciation of mathematics in students who do not anticipate a need for mathematics in their future studies. Students taking this course need to be already equipped with fundamental skills and a rudimentary knowledge of basic processes.

### **Difference between higher and standard Level**

This course includes topics in Sets and Logic that are not included in the other two courses. The focus of this course is in the day to day application of basic skills in mathematics. Although all three courses have a range of topics, Mathematical Studies introduces the key concepts of the topics through applications and simple techniques. The development of topics starts from first principles and builds on student's own logical thinking skills.

### **Course Content**

7 Core topics: Numbers and Algebra, Descriptive Statistics, Logic, sets and probability, Statistical Applications, Geometry and trigonometry, Mathematical Models and Introductory differential calculus.

### **Assessment Details**

Internal Assessment: (20% of the final grade)

Students must complete the Project, an individual mathematics investigation in a topic of student's choice. The project is an individual piece of work involving the collection of information or the generation of measurements, and the analysis and evaluation of the information or measurements.

The project provides an opportunity for students to carry out a mathematical investigation in the context of another course being studied, a hobby or interest of their choice using skills learned before and during the course. This process allows students to ask their own questions about mathematics and to take responsibility for a part of their own course of studies in mathematics.

External Assessment: (80% of the final grade split equally over two papers)

Paper 1	1 hour 30 minutes	Short response questions
Paper 2	1 hour 30 minutes	Extended response questions

### **Prerequisites and Special Requirements**

All students may select this course.

### **Who should choose this course?**

- You would like to focus on other subjects more than math.
- Your grades in math are not always very good.
- You are interested in studying subjects in the humanities and the arts at university.

### **Who should not choose this course?**

This course is occasionally not accepted for entrance into some university programs that require a strong mathematics background such as engineering, advanced economics, chemistry or physics and this also depends on the country. Students and parents should research university requirements for particular majors.

### **Reference:**

International Baccalaureate, [Diploma Programme Mathematical Studies SL](#). Cardiff, United Kingdom: International Baccalaureate, 2012.

## **Group 5: MATHEMATICS**

## **Standard Level**

This course caters for students who already possess knowledge of basic mathematical concepts, and who are equipped with the skills needed to apply simple mathematical techniques correctly. The majority of these students will expect to need a sound mathematical background as they prepare for future studies in subjects such as chemistry, economics, psychology and business administration.

### **Difference between higher and standard Level**

This course covers the same core topics as higher level but includes a smaller range of techniques and fewer proofs. There is no option for the SL course.

### **Course Content**

The course focuses on introducing important mathematical concepts through the development of mathematical techniques. The intention is to introduce students to these concepts in a comprehensible and coherent way, rather than insisting on mathematical rigor. Students should wherever possible apply the mathematical knowledge they have acquired to solve realistic problems set in an appropriate context.

7 Core topics: Algebra, Functions and equations, Circular functions and trigonometry, Trigonometry, Vectors, Statistics, Probability, Calculus

### **Assessment Details**

Internal Assessment (20%):

#### *Mathematical Exploration*

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. 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.

External Assessment:

Paper 1: (40%)	1.5 hours, calculator not allowed
Paper 2 (40%)	1.5 hours, calculator required

### **Prerequisites and Special Requirements**

- You could be in either of the Grade 10 Math classes
- If you are in the standard class, you achieve an overall grade of at least a 5
- You are able to consistently score at level 5 or higher on Criterion A

### **Who should choose this course?**

- You are a good math student and can apply simple mathematical techniques correctly.
- You feel successful when doing math.
- You are interested in studying science, engineering, economics or business in university.
- You plan on taking physics or chemistry in DP.

### **Who should not choose this course?**

Students seeking admission in highly competitive universities in technical fields may want to consider Mathematics HL if they qualify.

#### **Reference:**

International Baccalaureate, Diploma Programme Mathematics SL. Cardiff, United Kingdom: International Baccalaureate, 2012.



## Group 5: MATHEMATICS

## Higher Level

This course caters for students with a good background in mathematics who are competent in a range of analytical and technical skills. The majority of these students will be expecting 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. Others may take this subject because they have a strong interest in mathematics and enjoy meeting its challenges and engaging with its problems.

### Difference between higher and standard Level

The abstract areas of justification and proof are key aspects of this course. This course should only be taken by students who truly enjoy abstract mathematical challenges and thought.

### Course Content

Math HL focuses on developing important mathematical concepts in a comprehensible, coherent and rigorous way, using a carefully balanced approach. Students are encouraged to apply their mathematical knowledge to solving problems set in a variety of meaningful contexts. Development of each topic includes 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.

6 Core topics: Algebra, Functions and equations, Circular functions and trigonometry, Vectors, Statistics & Probability, Calculus

One option: Statistics & Probability, Sets-Relations-Groups, Series & Differential Equations, Discrete mathematics

### Assessment Details

Internal Assessment (20%): *Mathematical Exploration*

The internally assessed component in this course is a mathematical exploration. This is a short report written by the student based on a topic chosen by him or her, and it should focus on the mathematics of that particular area. The emphasis is on mathematical communication (including formulae, diagrams, graphs and so on), with accompanying commentary, good mathematical writing and thoughtful reflection.

External Assessment:

Paper 1: (30%)	2 hours, calculator not allowed
Paper 2 (30%)	2 hours, calculator required
Paper 3 (20%)	1 hour, calculator required

### Prerequisites and Special Requirements

- You are in Grade 10 Extended math,
- You achieve an overall grade of at least a 5
- You are able to consistently score at level 6 or higher on Criterion A

### Who should choose this course?

- You consistently score 6-7's in math
- You have a range of analytical and technical math skills.
- You enjoy thinking mathematically
- You would like to study mathematics or engineering at university
- You have a teacher recommendation to do this course

### Who should not choose this course?

This course requires a high degree of fluency in mathematics. Students who struggle with algebraic manipulations and abstract thinking will struggle in this course.

### Reference:

International Baccalaureate, Diploma Programme Mathematics HL Guide. Cardiff, United Kingdom: International Baccalaureate, 2012.

## Group 6: MUSIC

## Higher and Standard Level

The aims of IB Music programme are to give students the opportunity to explore and enjoy the diversity of music throughout the world; encourage students to develop perceptual skills to recognize, speculate, analyze, identify, discriminate and hypothesize in relation to music; enable students to develop creatively their knowledge, abilities and understanding through performance and composition; assist students to develop their potential as musicians.

### Difference between higher and standard Level

HL Music is designed for the specialist music student with a background in musical performance and composition, who may pursue music at university or conservatoire level. SL Music is more accommodating for students with a variety of interests and backgrounds as shown below.

### Course Content

Higher Level Music (240 hours) has 3 compulsory parts:

- Musical Perception and Analysis
- Solo Performance: voice or instrument, one or more recitals
- Composition: three contrasting compositions

Standard Level Music (150 hours) has three options from which the student may choose:

1. Solo Performance Option. This is for students with a background in musical performance.
  - Musical Perception and Analysis
  - Solo Performance: voice or instrument, one or more recitals
2. Group Performance Option. This is for students with a general interest in music, or those without prior experience, particularly members of ensembles.
  - Musical Perception and Analysis
  - Group Performance: two or more public performances
3. Composition Option. This is for students with a background in composition.
  - Musical Perception and Analysis
  - Group Performance: two or more public performances

### Assessment Details

External Assessment – Sent to IB examiners for assessment	
Musical Perception and Analysis <ul style="list-style-type: none"><li>○ Study of Prescribed Work</li><li>○ Study of Music Genres and styles</li></ul> Musical Investigation	Examination - Listening Paper
Internal Assessment – Depends on HL or which SL options have been chosen. Internal Assessment is recorded, internally marked and the recording externally moderated by the IB.	
1. Solo Performance 2. Group Performance 3. Composition	

### Prerequisites and Special Requirements

Students choosing IB Music need strong music reading skills, at least two years of music performance experience (instrument or singing) and strong analytic skills.

### Who should choose this course?

IB Music is recommended to the students who may want to pursue music as their future career and also to those with the particular interest in music history, theory and practice.

### Who should not choose this course?

Students without preliminary music skills and knowledge should not choose IB Music.

### Reference:

International Baccalaureate, [Diploma Programme Music Guide](#). Cardiff, United Kingdom: International Baccalaureate Organization, 2009.

## Group 6: THEATRE

## Higher and Standard Level

IB Theatre is a multifaceted theatre making course which gives students the opportunity to make theatre as creators, designers, directors and performers. It emphasizes the importance of working both individually and collaboratively and offers the opportunity to engage actively in the creative process, transforming ideas into action as inquisitive and productive artists. Students apply research and theory to inform and contextualize their work and that of others.

### Difference between higher and standard level

The Higher Level course allows for greater breadth and depth of experience and learning through an additional assessment task which requires HL students to engage with theatre theorists and their theories.

### Course content

The theatre course at both SL and HL consists of three equal, interrelated areas; **Theatre in Context**, **Theatre Processes** and **Presenting Theatre**, each of which is explored from the specialist perspectives of creator, designer, director, performer.

**Theatre in Context** Students examine the personal, theoretical and cultural contexts that inform theatre-making and the ways in which these affect and influence creating, designing, directing, performing and spectating. One of the major objectives of the theatre in context area is to enrich students' development by experiencing theatre from a variety of times, places and cultures, both in theory and practice. Students will examine and experience these theatre traditions and performance practices practically.

**Theatre Processes** focuses on the students' exploration of the skills, techniques and processes involved in theatre-making. Students reflect on their own creative processes and skills acquisition as well as gaining a practical understanding of the processes of others

In this area of the course students explore from multiple perspectives, the various processes involved in making theatre in order to develop the necessary skills to make theatre and to examine processes used in theatre traditions from around the world.

**Presenting Theatre** addresses the staging and presentation of theatre as well as the presentation of ideas, research and discoveries through diverse modes of presentation, both practical and written. Students consider the impact of theatre and are encouraged to think about their own artistic intentions. Students will present their ideas about theatre and participate in performances. They will apply their practical theatre skills, individually and/or collaboratively, through a range of formats; productions, presentations and demonstrations, journals and at HL, solo performances.

### Assessment details

There are four major assessments in the last stages of the course

Assessment Task	SL	HL
<b>External assessment</b>		
<b>Task 1: Solo theatre piece (HL only)</b>	N/A	35%
Students at HL research a theatre theorist they have not previously studied, identify an aspect(s) of their theory and create and present a solo theatre piece (4–8 minutes) based on this aspect(s) of theory.		
<b>Task 2: Director's notebook</b>	35%	20%
Students at SL and HL choose a published play text they have not previously studied and develop ideas regarding how it could be staged for an audience.		
<b>Task 3: Research presentation</b>	30%	20%
Students at SL and HL plan and deliver an individual presentation (15 minutes maximum) to their peers in which they outline and physically demonstrate their research into a convention of a theatre tradition they have not previously studied.		
<b>Task 4: Collaborative project (Internal assessment)</b>	35%	25%
Students at SL and HL collaboratively create and present an original piece of		

theatre (lasting 13–15 minutes) for and to a specified target audience, created from a starting point of their choice.

### **Prerequisites and special requirements**

Whilst previous Drama experience is useful, it is not an essential requirement; the work of the course is approachable from multiple perspectives.

### **Who should choose this course?**

The theatre course provides a relevant learning opportunity for a diverse range of students as it lays an appropriate foundation for further study in theatre, performing arts and other related subjects. In addition, by instilling discipline, and refining communication, creative and collaborative skills it offers a valuable course of study for students who may wish to pursue a career or further education studies in areas unconnected to theatre. The course exemplifies the IB learner profile. Students who are willing to contribute their passion, creativity, divergent thinking, intellectual rigour, open-mindedness, curiosity and willingness to express themselves will be right at home.

### **Who should not choose this course?**

The course is for everyone except those who like to take a back seat and let others take risks.

### **Reference:**

International Baccalaureate, Diploma Programme Theatre Guide. Cardiff, United Kingdom: International Baccalaureate, April 2014

## Group 6: VISUAL ARTS

## Higher and Standard Level

The IB Visual Arts course is for students with a special interest in developing the skills of artistic investigation and expression. The IB Visual Arts course demands practice in the use of various media, knowledge and experimentation of artistic techniques, development of creative ideas and the ability to relate to all art in the many social, cultural and historical contexts.

### Difference between Higher and Standard Level

While the course content is the same for both higher and standard visual arts, the assessment criteria are different. The criteria for higher level are more rigorously applied which means the same piece of work assessed against the standard level criteria could earn higher marks than when assessed against the higher level criteria. This difference reflects the fact that higher level students need to produce more work, spend more time studying to a greater depth and demonstrate a greater development of skills and abilities.

### Course Content

The visual arts in context area provide a framework for understanding the contexts of visual arts through theoretical practice, art-making and curatorial practice. Students are encouraged to consider works of artists from a variety of cultural contexts and consider how these contexts have influenced their creation and inform how meaning and significance is transferred to an audience. Students identify the techniques and conventions used by artists when making art and consider how the range of forms, media, processes and techniques are used to realize artistic intentions. Students are required to view artworks within exhibitions and consider how curatorial interventions can also contribute to the ways works are perceived. Students are required to explore this area through a variety of art-making forms.

#### Assessment Details

	Ext/int	Standard level (SL)	Higher level (HL)
<b>Comparative study:</b> students analyse and compare artworks by different artists.	external	20%	20%
<b>SL:</b> compare at least 3 different artworks by two different artists with commentary over 10-15 screens. <b>HL:</b> As SL plus a reflection on the extent to which their work and practices have been influenced by any of the art/artists examined.			
<b>Process portfolio:</b> Student submit carefully selected materials which evidence their experimentation, exploration, manipulation and refinement of a variety of visual art activities	External	40%	40%
<b>SL:</b> 9-18 screens. The submitted work should be in at least two different art-making forms. <b>HL:</b> 13-25 screens. The submitted work should be in at least three different art-making forms.	External	40%	40%
<b>Curatorial practice:</b> students submit for assessment a selection of resolved artworks from their exhibition. The selected work should show evidence of their technical accomplishments during the visual arts course and an understanding of the use of materials, ideas and practices appropriate to visual communication.	Internal	40%	40%
<b>SL:</b> 4-7 pieces with exhibition text for each. A curatorial rationale (400 words max)			
<b>HL:</b> 8-11 pieces with exhibition text for each. A curatorial rationale (700 words max).			

### Prerequisites and Special Requirements

Students choosing IB Visual Arts need a strong self-guided work ethic and a love for artistic expression. A large amount of independent work outside of class will be required.

### Who should choose this course?

IB Visual Arts is recommended to the students who may want to pursue art related fields in university or for those who would like to broaden their perspectives on life through art.

### Who should not choose this course?

Students who are struggling academically or looking for a light course should not take IB Visual Arts. This is a rigorous course which will put heavy demands on a student's preparation time for their other subjects and on a student's personal time.

**Reference:**

International Baccalaureate, Diploma Programme Visual Arts Guide. Cardiff, United Kingdom: International Baccalaureate, 2007.