



Haileybury Astana



IB Booklet  
2024 -2026

# Headmaster's welcome



The International Baccalaureate is the fastest growing pre- university course in the world and is increasingly the first choice of top UK schools for their pupils. It is very interesting that independent research in the UK shows that IB pupils perform better in their degrees and earn more money after they leave university than with any other qualification.

As this is a truly international qualification, the IB DP fits well within the current growth of globally minded higher education students seeking university places outside of the UK and US. We see a growing number of parents and pupils recognising the higher educational quality on offer in countries such as Canada, Japan, Netherlands, South Korea, Australia to name a few and as the IB DP is truly global, this qualification allows for parents and pupils to keep all their options available to them throughout the application process. In a world where economies are changing and somewhat unpredictable, it is important that the future

generations are prepared, flexible and adaptable to future market catalysts.

At Haileybury we were one of the first schools in the UK to adopt the IB and we continue this tradition here at Haileybury Astana. The IB is a qualification which prepares pupils well for independent university study and is an excellent preparation for the future.

We are all happy to meet with either parents or pupils, to answer any questions you may have regarding life in the Sixth Form or our IB programme. We also offer advice and support on worldwide university entrance with specialist staff as well as leadership opportunities to help you every step of the way.

The IB is an exciting future and I look forward to us sharing the journey together.

**John Coles**  
**Headmaster**



# Head of Sixth Form welcome



As you move into Year 12, you start your journey to achieving your future aspirations and career goals. Which university should you choose? How are you going to get there? What subjects do you need to study?

At Haileybury Astana, we understand that you are facing many uncertainties and making difficult decisions; however, our team of tutors, coordinators, guidance counselors and teachers are here to offer expert personal support and advice to help you make the right choices.

Haileybury Astana 6th form is a community whereby pupils are challenged, supported and given ample opportunities to develop the skills required for future success. Both the academic rigor of the IBDP courses and the wider opportunities available through our extracurricular provision aid in your development into a balanced, internationally minded student who will be prepared for all future eventualities.

Geoff Parks, former Director of Admissions at Cambridge University, UK stated, 'Because the IB differentiates better than A-level, if we are hesitating about making an offer at all, we would be more likely to make an offer to an IB student than an A-level student.'

The Director of Undergraduate Admissions at Harvard also speaks very highly of the IB and announced 'The IB is well known to us for excellent preparations. Success in an IB programme correlates well with success at Harvard.'

The information on the pages that follow is intended to give both you and your parents an insight into what life is like here at Haileybury Astana 6th Form. We hope that this guide will be helpful when making important decisions as it contains useful information about the IBDP, course outlines, assessment frameworks, university applications and career options.

Remember, with hard work and excellent opportunities, you can reach your goals and we are here to help guide and support you.

Dream, believe, achieve.

**Mr Najib Sboui**  
**Head of Sixth Form**





  
HaileyburyAstana

H A I L E Y B U R Y

Junior School 1



# IB Mission Statement

‘The International Baccalaureate® (IB) is more than its educational programmes and certificates. At our heart we are motivated by a mission to create a better world through education.

We value our hard-earned reputation for quality, for high standards and for pedagogical leadership. We achieve our goals by working with partners and by actively involving our stakeholders, particularly teachers.

We promote intercultural understanding and respect, not as an alternative to a sense of cultural and national identity, but as an essential part of life in the 21<sup>st</sup> century.

All of this is captured in our 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.’



# IB Learner Profile

The IB Learner Profile represents 10 attributes valued by IB world schools. These attributes, and others like them, are key to helping individuals and groups become responsible members of local, national and global communities.

The IB defines these as follows:

### **Inquirers**

We nurture our curiosity, developing skills for enquiry and research. We know how to learn independently and with others. We learn with enthusiasm and sustain our love of learning throughout life.

### **Knowledgeable**

We develop and use conceptual understanding, exploring knowledge across a range of disciplines. We engage with issues and ideas that have local and global significance.

### **Thinkers**

We use critical and creative thinking skills to analyse and take responsible action on complex problems. We exercise initiative in making reasoned, ethical decisions.

### **Communicators**

We express ourselves confidently and creatively in more than one language and in many ways. We collaborate effectively, listening carefully to the perspectives of other individuals and groups.

### **Principled**

We act with integrity and honesty, with a strong sense of fairness and justice, and with respect for the dignity and rights of people elsewhere. We take responsibility for our actions and their consequences.

### **Open-minded**

We critically appreciate our own cultures and personal histories, as well as the values and traditions of others. We seek and evaluate a range of points of view, and we are willing to grow from the experience.

### **Caring**

We show empathy, compassion and respect. We have a commitment to service, and we act to make a positive difference in the lives of others and in the world around us.

### **Risk-takers**

We approach uncertainty with forethought and determination; we work independently and co-operatively to explore new ideas and innovative strategies. We are resourceful and resilient in the face of challenges and change.


### **Balanced**

We understand the importance of balancing different aspects of our lives – intellectual, physical and emotional – to achieve well-being for ourselves and others. We recognise our interdependence with other people and with the world in which we live.

### **Reflective**

We thoughtfully consider the world and our own ideas and experience. We work to understand our strengths and weaknesses in order to support our learning and personal development.



A photograph of four students standing in a modern building hallway. From left to right: a young man in a black sweater over a white collared shirt, a young man in a dark green blazer over a white shirt and red tie, a young woman in a dark grey long-sleeved top and dark jeans, and a young woman in a dark grey t-shirt with a small white logo on the chest. They are all looking towards the camera. The background shows a modern building interior with large windows and a green wall with a large 'P' logo.

“Our teachers always  
find time to support  
and guide us.”

Haileybury Astana Pupil





# Overview of the IB DP

The international Baccalaureate Diploma Programme is an assessed programme for pupils aged 16 – 19. It was established in 1968 to provide pupils with a balanced education, to facilitate geographic and cultural mobility and to promote international understanding. Teachers at the International School of Geneva created the programme, with assistance from several other international schools. Since then, innovative and committed teachers and examiners from around the world have played a significant role in the development of the programme.

The IBDP enables the development of pupils who:

- Have excellent breadth and depth of knowledge.
- Flourish physically, intellectually, emotionally and ethically.
- Study at least two languages.
- Excel in traditional academic subjects.
- Explore the nature of knowledge through the programme's unique theory of knowledge course.

International research shows, among other things, that IBDP pupils are better able than their peers to cope with demanding workloads, manage their time and meet the expectations placed on them.

We, at Haileybury Astana, believe the IBDP to be the best pre-university experience on offer today. It is the gold standard in international Sixth Form education and has been shown to provide the best preparations for the most competitive universities.

### Diploma Requirements

In order to gain the full IB Diploma, pupils are required to study six subjects:

- Three subjects must be studied at High Level (HL).
- Three subjects must be studied at Standard Level (SL).

Each of the six subjects is awarded a grade on a scale of 1 to 7, with 7 being the highest grade. In addition, a maximum of 3 bonus points may be gained from a candidate's combined Extended Essay and Theory of Knowledge grades.

The maximum number of possible points to be obtained on an IB Diploma:

$$[(6 \text{ subjects} \times 7 \text{ points}) + 3 \text{ points}] = 45 \text{ points}$$

In order to obtain the full Diploma a pupil:

- Must score a minimum of 24 points.
- A Minimum of 12 points in HL Subjects and 9 Points overall in SL Subjects in needed to gain the full diploma.
- Must also submit an Extended Essay and Theory of Knowledge assessments.
- Must meet the CAS requirements.



“We had a lot of support from our teachers, especially from our university counselor who helped us step by step to write our personal statements.”

Haileybury Astana Pupil



## The IB Subject Choice

When making subject choices, pupils should take into consideration the following:

- Aptitude and prior attainment: it is important to choose a course that is within the ability of the pupil. Suggested entry requirements for each of the subjects: HL subjects – GCSE B or above or the equivalent SL subjects – GCSE C or above.
- ISCO (Morrisby) tests, which are taken by all pupils in Year 11 at Haileybury Astana, give an objective assessment of pupils' interests and abilities regarding careers.

Career and university entry requirements. Someone wishing to read medicine would almost certainly need to study Biology and Chemistry at HL, for example.

Equally, different university systems have unique requirements. The university counsellors will be happy to advise. While Haileybury Astana is happy to give advice, it is the pupils' responsibility to ensure that any necessary entry requirements are met.

Diploma requirements, as stated above, three subjects must be chosen at HL, and three at SL.

Subject choices will be made provisionally during Year 11 with final confirmation at the start of Year 12. All pupils will need to discuss their plans with their tutor, subject teachers, parents, and the IB Coordinator before finalising their choices.

Students must choose a course from within each of the six subject groups.

Group	Group Name	Subjects on offer at Haileybury Astana
1	Studies in Language and Literature	English A (HL and SL) Russian A (HL and SL)
2	Language Acquisition	English B (HL and SL) French B (HL and SL) Russian B (HL and SL) Spanish Ab Initio (SL Only) Russian Ab Initio (SL Only)
3	Individuals and Societies	History (HL and SL) Geography (HL and SL) Business Management (HL and SL) Economics (HL and SL)
4	Sciences	Biology (HL and SL) Physics (HL and SL) Chemistry (HL and SL) Sport Exercise and Health (HL and SL) Computer Science (HL and SL)
5	Mathematics	Analysis and Approaches (HL and SL) Application and Interpretation (HL Only)
6	The Arts / Elective Subject	Visual Arts (HL and SL) Music (HL and SL) An additional Science Subject An additional Individual and Societies Subject

Assessment in the IB Diploma

For most subjects the assessment is made up of internal assessment (coursework) and external examinations. The internal assessment (coursework) is normally marked internally and then moderated externally by the IB Organisation (IBO). The final examinations are set and marked externally by the IBO and taken during the month of May in the second year of the course. Details of the coursework proportions per subject are supplied in the table below.

Grading Scale with Description

Approaches to learning		General IBDP Grade Descriptors for Attainment	
A+	Has an excellent approach towards learning	Grade 7 (Excellent)	Produces high-quality, frequently innovative work. Communicates comprehensive, nuanced understanding of concepts and contexts. Consistently demonstrates sophisticated critical thinking. Frequently transfers knowledge and skills with independence and expertise in a variety of complex and real-world situations.
A	Has a very good approach towards learning	Grade 6 (Very good)	Produces high-quality, occasionally innovative work. Communicates extensive understanding of concepts and contexts. Demonstrates critical and creative thinking frequently with sophistication. Uses knowledge and skills in familiar and unfamiliar classroom and real-world situations, often with independence.
B+	Has many of the habits of a good learner	Grade 5 (Good)	Produces generally high-quality work. Communicates secure understanding of concepts and contexts. Demonstrates critical and creative thinking, sometimes with sophistication. Uses knowledge and skills in familiar classroom and real-world situations and, with support, some unfamiliar real-world situations.
B	Shows some of the habits of a good learner, but needs to develop them further	Grade 4 (Satisfactory)	Produces good-quality work. Communicates basic understanding of most concepts and contexts with few misunderstandings and minor gaps. Often demonstrates basic critical and creative thinking. Uses knowledge and skills with some flexibility in familiar classroom situations, but requires support in unfamiliar situations.
C+	Approach to learning can often be a barrier to further progress	Grade 3 (Mediocre)	Produces work of an acceptable quality. Communicates basic understanding of many concepts and contexts with occasionally significant misunderstandings or gaps. Begins to demonstrate some basic critical and creative thinking. Is often inflexible in the use of knowledge and skills, requiring support even in familiar classroom situations.
C	Approach to learning is poor and needs improvement	Grade 2 (Poor)	Produces work of limited quality. Expresses misunderstandings or significant gaps in understanding for many concepts and contexts. Infrequently demonstrates basic critical or creative thinking. Generally inflexible in the use of knowledge and skills, infrequently applying knowledge and skills.
		Grade 1 (Very poor)	Produces work of very limited quality. Conveys many significant misunderstandings or lacks understanding of most concepts and contexts. Very rarely demonstrates critical or creative thinking. Very inflexible, rarely using of knowledge or skills.





# IB DP – Successful University Applications

The following are general guidelines that are a starting point but requirements for specific programmes can change. There are many subjects not listed here that can be studied at university level, which have no specific IBDP requirements. Pupils are responsible for checking latest university entrance requirements, which can change each year. The guide below is only for very general use to help you remember every university has

its own requirements. Specific European universities often have IBDP prerequisites in Languages, Humanities, Mathematics and Sciences. Interested pupils must check individual university websites for details.

Remember there are not many European Universities with degrees taught all in English.



Group	Subject	Level	Extras
Medicine	Mathematics	SL or HL	BMAT – UK admission
	Chem	HL	
	Bio/Physics	HL	
	English (A or B)	SL	
Bio-technology	Mathematics	SL or HL	2 Sciences at HL
	Chem	HL	
	Bio/Physics	HL	
	English (A or B)	SL	
Optometry	Chem	HL	3 Sciences at HL for some universities/ countries.
	Bio	HL	
	Mathematics	SL or HL	
	English (A or B)	SL	
Dentistry	Chem	SL or HL	UK universities require 2 sciences at HL. Other universities require HL in 1 science and SL in 2nd science.
	Bio	SL or HL	
	English (A or B)	SL	
Engineering	Physics	HL	Mathematics at SL is acceptable for some courses – make sure you do your research.
	Mathematics	HL	
	Chem	HL	
	English (A or B)	SL	
Psychology	English (A or B)	HL or SL	HL or SL will depend on the course and the university, do your research.
	Mathematics	HL or SL	
	Any Science	HL or SL	
Creative Careers	English (A or B)	SL	Most creative courses such as fashion design, music and drama will expect to see a portfolio of actual work that you have produced.
	Music	HL	
	Visual Arts	HL	
Marketing	Mathematics	SL	Entry requirements have a lot of variation so do your research. Some degrees re more creative, others are more mathematics based.
	English (A or B)	SL	
Veterinary Science	Mathematics	SL or HL	Very competitive so rest of CV will be looked at.
	Chem	HL	
	Bio/Physics	SL	
	English (A or B)	HL	
Law	History	HL	LNAT for UK admission. Work experience in some form of admin/law capacity can help.
	English A	HL	
Finance/Business Management	Mathematics	SL	Entry requirements for each course can be very specific.  Do not narrow down your subjects here.
	English	SL	





# Personalised Pathways at Haileybury Astana 6<sup>th</sup> Form

While the IB framework and principles serve as the heart of our programme, academics at Haileybury Astana are supplemented by additional instruction in languages, the arts, technology and service. Through extensive support systems, every pupil at Haileybury Astana receives individual guidance in developing their unique strengths and passions.

Graduating seniors will obtain a High School Diploma and may, depending upon their interest and future plans, earn several IB certificates or take the full IB DP.

Upon beginning Year 12, pupils may choose to pursue the full IB Diploma, individual courses, or a combination of the IB and Haileybury courses. Though all pupils who successfully complete their final year receive the Haileybury High School Diploma, through these pathways they can also distinguish themselves from their peers around the globe by earning individual IB certificates or an IB Diploma.

Though Haileybury Astana encourages all pupils to pursue the IB DP, we also believe in providing as many unique opportunities to pupils as possible.

All the Haileybury High School courses are taken in conjunction with the IB courses, focussing on areas of strengths or interest. They provide grade point average equivalence used for college or university acceptance.

Additionally, they reinforce essential concepts and skills that can be applied both in and out of the classroom. The courses are open to all year 12 and year 13 students and provide further opportunity for pupils to have a challenging, engaging and successful education at Haileybury Astana.



Pass	Merit	Distinction
<p>To achieve a Pass:</p> <ul style="list-style-type: none"> <li>Gain a minimum of 22 credits across two years of study.</li> <li>Achieve a passing Diploma Grade in Mathematics, English and two other subjects.</li> <li>Achieve a ‘C+’ Approaches to Learning (ATL) grade or above across all subjects.</li> <li>Deliver a presentation on agreed theme.</li> <li>Completed at least a year (60 hours) of CAS.</li> <li>Complete at least 1 of the following: <ul style="list-style-type: none"> <li>Leadership Activity;</li> <li>International Award (Bronze);</li> <li>Sports Leader Award;</li> <li>Graded Music Award.</li> </ul> </li> <li>Undertake an interview with senior staff to demonstrate you have achieved this.</li> </ul>	<p>To achieve a Merit:</p> <ul style="list-style-type: none"> <li>Gain a minimum of 25 credits across two years of study.</li> <li>Achieve a passing Diploma Grade (5+) in Mathematics and English plus three other subjects.</li> <li>Achieve a ‘B’ Approaches to Learning (ATL) grade or above across all subjects.</li> <li>Take part in a Specialist Workshop.</li> <li>Complete at least two years (120 hours) of CAS.</li> <li>Undertake a job shadowing/ work experience.</li> </ul>	<p>To achieve a Distinction:</p> <ul style="list-style-type: none"> <li>Gain a minimum of 28 credits across two years of study.</li> <li>Hold an Ambassador/Pupil Council/ Leadership Role.</li> <li>Take part in more than one Specialist Workshop.</li> <li>Deliver a presentation each year.</li> <li>Complete at least two years (120 hours) of CAS and complete an EE research project.</li> </ul>



# The IB Core

As the diagram below shows, the IB Diploma programme is divided into a central core and six academic subjects.

At the core are three components:

- An Extended Essay – The EE is a 4000-word essay on a subject of interest to the pupil.
- A course on the theory of knowledge – TOK invites pupils to question the basis and limits of knowledge from their own perspective.
- CAS – Creativity, Activity and Service – Pupils must undertake and reflect on a variety of activities. These may include learning to play an instrument, improving sporting skills or being a reading mentor. The school has an extensive range of service activities in the local community in which pupils are actively encouraged to take part.





- The Creativity, Action and Service element must be completed but does not count towards the Diploma points, but the reflections and activities portfolio must be completed and signed off in order to gain the Diploma.
- These grades are then combined according to the following table and up to three points can be awarded.

	Grade A	Grade B	Grade C	Grade D	Grade E	No Grade
Grade A	3	3	2	2	Falling condition	Falling condition
Grade B	3	2	2	1	Falling condition	Falling condition
Grade C	2	2	1	0	Falling condition	Falling condition
Grade D	2	1	1	0	Falling condition	Falling condition
Grade E	Falling condition	Falling condition	Falling condition	Falling condition	Falling condition	Falling condition
No Grade	Falling condition	Falling condition	Falling condition	Falling condition	Falling condition	Falling condition



# Creativity, Action and Service (CAS)

Creativity, Activity, Service is an integral part of the IB pupils' Diploma. It complements academic study with less formal, experiential learning in situations which challenge and extend pupils' capabilities and enable them to recognise and respond to inequality and injustice in society by proposing practical solutions to what often appear to be intractable problems. The program also fosters pupils' emotional and psychological maturity and acts as a counterweight to the pressures placed on young people to disengage from or remain passive within society. Pupils are given the opportunity to participate in a balanced range of activities across the three components and to reflect, in a variety of ways, on their evolution as productive and purposeful agents of change, aware of their capabilities to reshape the world in which they live. CAS activities are undertaken within and beyond HAS, both individually and as part of a group, and based around the following components:

**Creativity:** Often linked to service but including any activity of a creative nature.

**Activity:** This includes rigorous physical activity, whether individually or as a team; sports, IB PE, expeditions such as Duke of Edinburgh and IA, the active, physical aspects of creative and service Activities.

**Service:** This covers activities which have a useful impact on, and beneficial consequences for others, including service to the disadvantaged and the disenfranchised; service to the school or the local or international community and custodianship of the environment.

The CAS programme aims to develop pupils who:

- Enjoy and find significance in a range of CAS experiences.
- Purposefully reflect upon their experiences.
- Identify goals, develop strategies and determine further actions for personal growth.
- Explore new possibilities, embrace new challenges and adapt to new roles.
- Actively participate in planned, sustained, and collaborative CAS projects.
- Understand they are members of local and global communities with responsibilities towards each other and the environment.

## Requirements

CAS is a core part of the curriculum across both Year 12 and 13. It is not formally timetabled and to be successful in CAS there needs to be evidence of weekly engagement across 18 months. This evidence is in the form of critical reflection through different mediums such as blogs, journals, photographs and video diaries. This recorded information forms the crucial evidence that is used in the CAS experiential learning final reflection that is written at the conclusion of the 18 months of activities. All the above documents form a pupil's CAS Portfolio.

**“Cultural events are very important for the students to develop not only academically but also culturally and socially.”**

# Theory of Knowledge (TOK)

Theory of Knowledge (TOK) is a mandatory component of the IB Diploma Programme. It challenges students to engage with and reflect on knowledge by exploring a central question: how do we know what we claim to know?

The Theory of Knowledge course is based on 12 key concepts: certainty, culture, evidence, explanation, interpretation, justification, objectivity, perspective, power, responsibility, truth, and values. Using these concepts, students are taught to question their assumptions about how knowledge is produced, acquired and communicated.

Theory of Knowledge supports the academic requirements of the IB Diploma programme by giving students the skills and confidence to evaluate their claims, engage with alternative perspectives and produce written responses that are clear, coherent and persuasively argued with relevant evidence and examples.

The TOK curriculum aims to develop pupils who:

- reflect critically on diverse ways of knowing and on areas of knowledge
- consider the role and nature of knowledge in their own culture, in the cultures of others and in the wider world.
- are aware of themselves as thinkers and are more acquainted with the complexity of knowledge.
- recognise the need to act responsibly in an increasingly interconnected but uncertain world.

## Requirements

TOK is a core part of the curriculum across Years 12 and 13. It is timetabled weekly, and lessons provide pupils with opportunities to engage with knowledge issues across each of their subject areas. Pupils also explore how TOK manifests beyond the classroom through the study of three key units: Knowledge and the Knower, Knowledge and Technology and Knowledge and Language.

In Year 12, TOK is assessed through the completion of the TOK Exhibition which focuses on an overarching knowledge question. Students respond to this question by producing a 900-word written commentary based on three objects which reflect and articulate how TOK manifests in the real world.

In Year 13, TOK is assessed through the completion of the TOK essay which is a 1600-word exploration of knowledge concepts across two areas of knowledge. The essay is written in response to an essay title that is released in September of Year 13.

**“TOK is an important part of the IBDP because it allows students to approach the world from a critical perspective and teaches them about the limitations to the knowledge they may have.”**

IB student.



# Extended Essay (EE)

The Extended Essay is a 4,000 word research project, designed to allow students to explore an area of their own interest in one of their subjects. Completion of the project is a requirement for passing the IBDP and it offers students the chance to write in the academic style expected at university level.

Students formulate their own research question in a subject of their choice and are then assigned a subject specialist as their supervisor for the duration of the project. Their research skills, critical thinking skills and formal, academic writing skills will all be honed throughout the process. Approaching texts and sources from a critical standpoint is an invaluable skill and students will learn this as part of their core sessions as they approach the project.

The Extended Essay aims to develop pupils who:

- Engage enthusiastically with an extensive, academic project.
- Manage their time and work independently towards the deadlines they are set.
- Seek out support and guidance from their supervisor.
- Approach new information from a critical point of view.
- Demonstrate academic integrity in their use of texts and sources.
- Present their findings in a coherent, academic style.
- Reflect on their conclusions and their own approach to the project.

“The Extended Essay really helped me improve my writing skills and I feel as if my writing in all my other Internal Assessments has improved because of this process.”

Haileybury student

# Group 1: Studies in Language and Literature

This is a language that you are ‘at home with.’ Some may think of it as their ‘first language.’

We offer Language A: Literature in English and Language A: Language and Literature in Russian. In this course, students study a wide range of literary and non-literary texts in a variety of media. By examining communicative acts across literary form and textual type alongside appropriate secondary readings, students will investigate the nature of language itself and the ways in which it shapes and is influenced by identity and culture. Approaches to study in the course are meant to be wide ranging and can include literary theory, sociolinguistics, media studies and critical discourse analysis among others. You'll gain a healthy respect for the power of imagination and you'll learn to analyse complex ideas and express thoughts orally and on paper. Whether or not you continue to study language and literature after leaving school, the command and understanding that you gain through the IB first language course will open doors for you for the rest of your life.









# English

## A Language and Literature

### Course Aims

- To engage with a range of text types from a variety of periods, styles and cultures;
- To develop skills in interpretation, analysis and evaluation;
- To explore the relationships between texts, their contexts and the global issues they present;
- To develop skills in listening, speaking, reading, writing and presenting;
- To encourage a life-long interest in literature and an enjoyment of text exploration.

### Overview

Pupils will explore literature from across the world, spanning many different time periods and genres. They will interrogate texts to explore the intentions of the writer, the reception of a text and the way in which the text speaks to individual readers. They will learn to analyse the literary devices and techniques that a writer employs in order to conjure a world on the page. The texts that we study (whether they are poems, plays, novels, short stories or non-fiction texts) enable pupils to engage with a range of global issues and consider how the world around

us is represented in many different forms. The rich vocabulary and the fluency of writing in the chosen texts offer pupils excellent examples that they can learn from for their own writing. The ability to communicate in written form, alongside the course's emphasis on speaking and presentation skills ensures that pupils establish their own academic and analytical approach to literary texts. The pleasure of exploring meaning, themes and messages in a vast array of literary works will encourage students to think independently, critically, conceptually and sensitively as English Literature scholars.





Assessment outline

	Internal Assessment	External Assessment
Higher Level	Individual Oral 20% HL Essay 20%	<b>Paper 1:</b> 2 Guided textual analysis 35% <b>Paper 2:</b> Comparative Essay 25%
Standard Level	Individual Oral 30%	<b>Paper 1:</b> Guided textual analysis 35% <b>Paper 2:</b> Comparative Essay 35%

Potential Careers

The skills acquired while studying language and literature are invaluable in any career requiring analytical thought and an ability to communicate clearly and succinctly, both in writing and in person. Literary specialists excel in careers such as publishing, law, advertising, marketing, politics, journalism, communications and PR.

# Russian

## A Language and Literature

### Course Aims

The aims of studies in Russian language and literature is to enable students to:

1. engage with a range of texts, in a variety of media and forms, from different periods, styles, and cultures;
2. develop skills in listening, speaking, reading, writing, viewing, presenting and performing;
3. develop skills in interpretation, analysis and evaluation;
4. develop sensitivity to the formal and aesthetic qualities of texts and an appreciation of how they contribute to diverse responses and open up multiple meanings;
5. develop an understanding of relationships between texts and a variety of perspectives, cultural contexts, and local and global issues;
6. develop an understanding of the relationships between studies in language and literature and other disciplines;
7. communicate and collaborate in a confident and creative way;
8. foster a lifelong interest in and enjoyment of language and literature.





Overview

Pupils will learn about the complex and dynamic nature of language and explore both its practical and aesthetic dimensions. They will explore the crucial role language plays in communication, reflecting experience and shaping the world. Students will also learn about their own roles as producers of language and develop their productive skills. Throughout the course, students will explore the various ways in which language choices, text types, literary forms and contextual elements all effect meaning. Through close analysis of various text types and literary forms, students will consider their own interpretations, as well as the critical perspectives of others, to explore how such positions are shaped by cultural belief systems and to negotiate meanings for texts. Students will engage in activities that involve them in the process of production and help shape their critical awareness of how texts and visual and audio elements work independently or together to influence the audience/reader and how audiences/readers open up the possibilities of texts. With its focus on a wide variety of communicative acts, the course is meant to develop sensitivity to the foundational nature, and pervasive influence, of language in the world at large.

Across the three areas of exploration at least four literary works must be studied in the SL course and at least six literary works must be studied in the HL course.

Assessment

	Internal Assessment	External Assessment
Higher Level	Individual Oral 20%	<b>Paper 1:</b> 2 Guided textual analysis 35% <b>Paper 2:</b> Comparative Essay 25% <b>HL Essay 20%</b>
Standard Level	Individual Oral 30%	<b>Paper 1:</b> Guided textual analysis 35% <b>Paper 2:</b> Comparative Essay 35%

Potential Careers

The skills acquired while studying language and literature are invaluable in any career requiring analytical thought and an ability to communicate clearly and succinctly, both in writing and in person. Literary specialists excel in careers such as publishing, law, advertising, marketing, politics, journalism, communications and PR.



# Group 2: Language Acquisition

As a pupil in an international school, you already know the importance of language. Studying an additional language goes beyond basic communication.

An additional language opens doors to other cultures and builds bridges between societies. You'll learn

more about people by studying their language and culture, and you'll broaden yourself in the process.

Our global society is becoming smaller and smaller, and the language skills and cultural tolerance you learn as part of the IB programme will serve you well, whatever you end up doing and wherever you end up living.



# English B, Russian B, French B, Spanish Ab Initio (SL only), Russian Ab Initio (SL only)

## Course Aims

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

## Overview

Pupils develop the ability to communicate in the target language through the study of language, themes and texts. In doing so, they also develop conceptual understandings of how language works. Communication is evidenced through receptive, productive and interactive skills across a range of contexts and purposes that are appropriate to the level of the course. The study of language requires careful attention to forms, structures, functions and conceptual understandings of language. Knowledge of vocabulary and grammar—the what of language—is reinforced and extended by understanding the why and how of language: audience, context, purpose, meaning. Students expand the range of their communication skills by understanding and producing a wide variety of oral and written texts for audiences, contexts and purposes associated with academic and personal interests. For the development of receptive skills, language B students must study authentic texts that explore the culture(s) of the target language. In addition, the study of two literary works is required at HL.

## Assessment Outline for Language B

	Internal Assessment	External Assessment
Higher Level	Individual Oral 25%	<b>Paper 1:</b> Productive skills 25% (450 – 600-word essay) <b>Paper 2:</b> Receptive Skills 50%
Standard Level	Individual Oral 25%	<b>Paper 1:</b> Productive skills 25% (250 – 400-word essay) <b>Paper 2:</b> Receptive Skills 50%



## Assessment Outline for Ab Initio

Assessment component	Weighting
<p><b>External assessment (2 hours 45 minutes)</b></p> <p><i>Paper 1 (1 hour)</i></p> <p>Productive skills-writing (30 marks)</p> <p>Two written tasks of 70-150 words each from a choice of three tasks, choosing a text type for each task from among those listed in the examination instructions.</p> <p><i>Paper 2 (1 hour 45 minutes)</i></p> <p>Receptive skills-separate sections for listening and reading (65 marks)</p> <p>Listening comprehension (45 minutes) (25 marks)</p> <p>Reading comprehension (1 hour) (40 marks}</p> <p>Comprehension exercises on three audio passages and three written texts, drawn from all five themes.</p>	<p>75%</p> <p>25%</p> <p>50%</p>
<p><b>Internal assessment</b></p> <p>This component is internally assessed by the teacher and externally moderated by the IB at the end of the course.</p> <p><b>Individual oral assessment</b></p> <p>A conversation with the teacher, based on a visual stimulus and at least one additional course theme. (30 marks)</p>	<p>25%</p>



# Group 3: Individuals and Societies

These subjects are about human experience and behaviour. People live in lots of different physical, economic and social environments.

You will learn about how people interact with each other and their environment, and about the history of social and cultural institutions. You will find that studying individuals and societies in an international school with pupils from a range of different countries is a unique preparation for life in a global society.

In addition, each subject is designed to foster in you the capacity to identify, to analyse critically and to evaluate theories, concepts and arguments relating to the nature and activities of individuals and Societies.

## Potential Careers

Studying a language is useful in variety of careers – the business world, the tourism industry, literature, journalism and the media, translation or teaching. However, its real value lies in the skills you will acquire over the two-year period. An understanding of people, foreign culture and a perspective on an increasingly “global” world is without doubt crucial.



# Business Management

## Aims

1. Encourage a holistic view of the world of business.
2. Empower students to think critically and strategically about individual and organizational behaviour.
3. Promote the importance of exploring business issues from different cultural perspectives.
4. Enable the student to appreciate the nature and significance of change in a local, regional and global context.
5. Promote awareness of the importance of environmental, social and ethical factors in the actions of individuals and organizations.
6. Develop an understanding of the importance of innovation in a business environment.

## Overview

Business management studies business functions, management processes and decision-making in contemporary contexts of strategic uncertainty. It examines how business decisions are influenced by factors internal and external to an organization, and how these decisions impact upon its stakeholders, both internally and externally. Business management also explores how individuals and groups interact within an organization, how they may be successfully

managed and how they can ethically optimize the use of resources in a world with increasing scarcity and concern for sustainability. The Diploma Programme business management course is designed to develop students' knowledge and understanding of business management theories, as well as their ability to apply a range of tools and techniques. Students learn to analyse, discuss and evaluate business activities at local, national and international levels. The course covers a range of organizations from all sectors, as well as the socio-cultural and economic contexts in which those organizations operate.

## Potential Careers

The Business Management course is excellent preparation for the world of work, as no matter what career a pupil decides to follow, there will always be an element of business within it. Whether it be a career in medicine or law, architecture or horticulture, an understanding of how businesses operate will prove invaluable. Business Management proves to be excellent preparation for any career in the corporate world, such as in human resources, marketing, finance or operations.





Assessment

	Internal Assessment	External Assessment
Higher Level	<p><b>Business research project 20%</b></p> <p>Students produce a research project about a real business issue or problem facing a particular organization using a conceptual lens of Change, Creativity, Ethics or Sustainability.</p>	<p><b>Paper 1: 25%</b></p> <p>Based on a pre-released statement that specifies the context and background for the unseen case study.</p> <p><b>Paper 2: 30%</b></p> <p>Based on an unseen case study with a quantitative focus.</p> <p><b>Paper 3: 25%</b></p> <p>Based on an unseen case study about a social enterprise.</p>
Standard Level	<p><b>Business research project 30%</b></p> <p>Students produce a research project about a real business issue or problem facing a particular organization using a conceptual lens of Change, Creativity, Ethics or Sustainability.</p>	<p><b>Paper 1: 35%</b></p> <p>Based on a pre-released statement that specifies the context and background for the unseen case study.</p> <p><b>Paper 2: 35%</b></p> <p>Based on an unseen case study with a quantitative focus.</p>

# Economics

## Aims

1. To use real world examples to analyse and evaluate economic issues.
2. To use real world examples to analyse and evaluate the policies used by governments to solve problems which have an economic impact on society.

## Overview

Economics is an exciting, dynamic subject that allows students to develop an understanding of the complexities and interdependence of economic activities in a rapidly changing world. The IB Diploma Programme economics course emphasizes the economic theories of microeconomics, which deal with economic variables affecting individuals, firms and markets, and the economic theories of macroeconomics, which deal with economic variables affecting countries, governments and societies.

## Assessment

	Internal Assessment	External Assessment
Higher Level	<b>Portfolio 20%</b> Applied Economics 3 commentaries (800 words each) based on different sections of the syllabus.	<b>Paper 1: 20%</b> Essay response based on all sections of the syllabus <b>Paper 2: 30%</b> Data response – essay response based on all sections of the syllabus <b>Paper 3: 30%</b> Policy paper based on all sections of the syllabus
Standard Level	<b>Portfolio 30%</b> Applied Economics 3 commentaries (800 words each) based on different sections of the syllabus.	<b>Paper 1: 30%</b> Essay response based on all sections of the syllabus <b>Paper 2: 40%</b> Data response – essay response based on all sections of the syllabus





## Potential Careers

It is assumed that you need a high level of maths to succeed in Economics but IB Economics is moving more and more towards understanding the real world and now leans less towards the abstract theoretical and conceptual understanding of models. It does develop rigour and good critical thinking skills and HL is assessed on numerical application – although this will seem quite basic by the time you are in year 13. This rigour and the numerical component make it a useful choice if applying to Mathematical and Science based courses. The critical thinking skills and the need to develop a concise and powerful writing-style is in demand in a wide variety of careers.

# Geography

**Aims**

1. Develop an understanding of the dynamic interrelationships between people, places, spaces and the environment at different scales.
  - a Develop a critical awareness and consider complexity thinking in the context of the nexus of geographic issues, including:
  - b acquiring an in-depth understanding of how geographic issues, have been shaped by powerful human and physical processes
2. Synthesizing diverse geographic knowledge in order to form viewpoints about how these issues could be resolved.
3. Understand and evaluate the need for planning and sustainable development through the management of resources at varying scales.

**Overview**

Geography is a dynamic subject that is firmly grounded in the real world and focuses on the interactions between individuals, societies and physical processes in both time and space. It seeks to identify trends and patterns in these interactions. It also investigates the way in which people adapt and respond to change and evaluates actual and possible management strategies associated with such change. Geography describes and helps to explain the similarities and differences between different places. These may be defined on a variety of scales, with varying powers over decision-making processes. Within individuals and societies subjects, geography is distinctive in its spatial dimension and occupies a middle ground between social or human sciences and natural sciences.

**Assessment**

	Internal Assessment	External Assessment
Higher Level	Fieldwork Study 20%	<b>Paper 1:</b> Geographical Themes 35% <b>Paper 2:</b> Geographical Perspectives 25% <b>Paper 3:</b> Global Interactions 20%
Standard Level	Fieldwork Study 25%	<b>Paper 1:</b> Geographical Themes 35% <b>Paper 2:</b> Geographical Perspectives 40%

**Potential Careers**

Geography opens the door to any job opportunity including Politics, consultants, engineering, journalism, law, business management, environmentalism, non-profit organisations and many more. Geography allows pupils to create and critically evaluate solutions to complex problems. Pupils become skilled at identifying and having empathy with a range of perspectives.



# History

## Aims

1. Develop an understanding of, and continuing interest in, the past.
2. Encourage students to engage with multiple perspectives and to appreciate the complex nature of historical concepts, issues, events and developments.
3. Promote international-mindedness through the study of history from more than one region of the world.
4. Develop an understanding of history as a discipline and to develop historical consciousness including a sense of chronology and context, and an understanding of different historical perspectives.
5. Develop key historical skills, including engaging effectively with sources.

## Assessment

	Internal Assessment	External Assessment
Higher Level	Research Essay 20%	Paper 1: 20% Paper 2: 25% Paper 3: 35%
Standard Level	Research Essay 25%	Paper 1: 35% Paper 2: 40%

6. Increase students' understanding of themselves and of contemporary society by encouraging reflection on the past.

## Overview

The SL course covers two essay topics for Paper 2, the Causes and Effects of Twentieth Century Wars and Authoritarian States while the Paper 1 source work topic is The Move to Global War about the causes of World War Two.

This makes possible a study of World War One, the rise of Hitler, World War Two as well as an examination of guerrilla warfare that focuses on the rise of Mao and Castro and an analysis of civil wars focusing on Spain and Nigeria. For HL, in addition to this, there is a Paper 3 where students study Russia from 1855 to 2000 and find out more about inter-war Europe. All students complete an Internal Assessment (IA) which is a 2200-word research essay into a topic of their choice.

## Potential Careers

The subject requires the ability to gather, analyse and communicate information, something invaluable in most walks of life. In particular, the evidence analysis component develops skills of internal and external analysis that refine students' abilities to assess the reliability and accuracy of information, something traditionally seen as a particularly good preparation for careers in the law or journalism.



## Group 4: Sciences

As you'll expect, these subjects are about science. More than that, though, you'll learn how scientists work and share ideas: about the "scientific method". If you have a love of science then of course the group 4 subjects will appeal to you, but the main skill which you will acquire from your group 4 subject(s) is the ability to answer technical questions and justify your answer. This will usually involve selecting the correct information to use from the large amount you are presented with.

This is of course what making decisions in real life is like and so is a vital skill to have in any career.

The group 4 subjects emphasise experimental work and a practical approach to learning, which will complement the different ways of learning in other parts of the IB programme. You can also choose to study two sciences together. This will be particularly important for you if you're thinking about careers in engineering, medicine or the pure sciences.



# Biology

## Aims

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

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

## Overview

A relevant and effective biology education needs to reflect societal change with a greater focus on skills and the interconnectedness of concepts, contexts and content, and facilitate deep learning and student understanding. Developments have taken place to address these needs.

The biology curriculum is built on four broad organizing themes, each comprising two concepts, together with four levels of organization, Molecules, Cells, Organisms and Ecosystems.



## Skills in the Study of Biology

<b>Unity and diversity</b>	Water • Nucleic acids • Origins of cells • Cell structure • Viruses • Diversity of organisms • Classification and cladistics • Evolution and speciation • Conservation of biodiversity
<b>Form and function</b>	Carbohydrates and lipids • Proteins • Membranes and membrane transport • Organelles and compartmentalization • Cell specialization • Gas exchange • Transport • Muscle and motility • Adaptation to environment • Ecological niches
<b>Interaction and interdependence</b>	Enzymes and metabolism • Cell respiration • Photosynthesis • Chemical signaling • Neural signaling • Integration of body systems • Defense against disease • Populations and communities • Transfer of energy and matter
<b>Continuity and change</b>	DNA replication • Protein synthesis • Mutations and gene editing • Cell and nuclear division • Gene expression • Water potential • Reproduction • Inheritance • Homeostasis • Natural selection • Sustainability and change • Climate change

## Experimental programme

Practical work

Collaborative sciences project

Scientific investigation

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

The DP biology course is built on:

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

These three pillars support a broad and balanced experimental programme. As students' progress through the course, they become familiar with traditional experimentation techniques, as well as

the application of technology. These opportunities help them to develop their investigative skills and evaluate the impact of error and uncertainty in scientific inquiry.

The scientific investigation then places a specific emphasis on inquiry-based skills and the formal communication of scientific knowledge.

Finally, the collaborative sciences project extends the development of scientific communication in a collaborative and interdisciplinary context, allowing students to work together beyond the confines of biology.



Assessment

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



Potential Careers

It is often a prerequisite for many other courses in higher education, such as medicine, microbiological science and environmental science. Jobs directly related are pharmacologist, biologist, ecologist, biotechnologist, forensic scientist, toxicology, veterinary, marine biology, and zoology. It helps build skills for analysis and problem- solving, monitoring/ maintaining records and data research and presentation.

# Chemistry

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

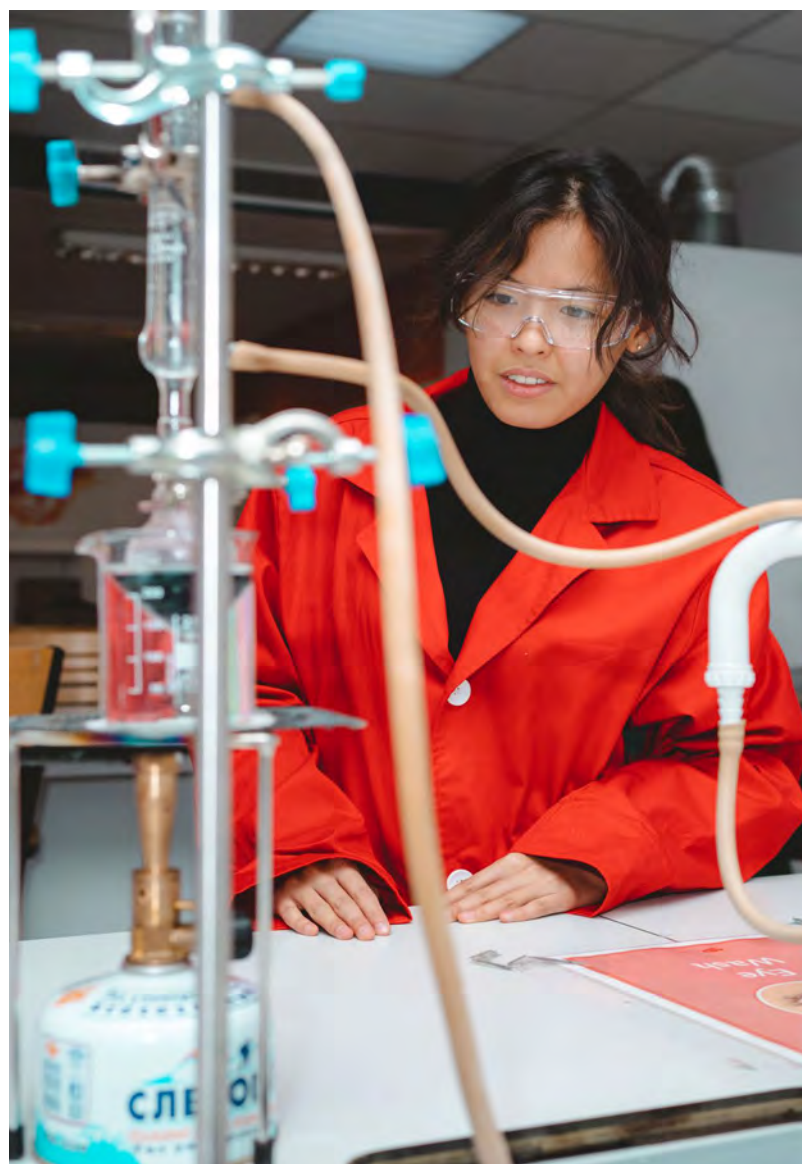
## Aims

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

## Overview

A relevant and effective chemistry education needs to reflect societal change with a greater focus on skills and the interconnectedness of concepts, contexts and content, and facilitate deep learning and student understanding.

The chemistry curriculum is built on two broad organizing concepts: structure and reactivity. Each of these concepts is subdivided into topics and subtopics, which are all connected through the idea that structure determines reactivity, which in turn transforms structure.





### Skills in the Study of Chemistry

<b>Structure:</b> refers to the nature of matter from simple to more complex forms	<b>Reactivity:</b> refers to how and why chemical reactions occur
<b>Structure 1 - Models of the particulate nature of matter</b> 1.1 Introduction to the particulate nature of matter 1.2 The nuclear atom 1.3 Electron configurations Structure 1.4 Counting particles by mass: The mole 1.5 Ideal gases	<b>Reactivity 1 - What drives chemical reactions?</b> 1.1 Measuring enthalpy change 1.2 Energy cycles in reactions 1.3 Energy from fuels 1.4 Entropy and spontaneity
<b>Structure 2 - Models of bonding and structure</b> 2.1 The ionic model 2.2 The covalent model 2.3 The metallic model 2.4 From models to materials	<b>Reactivity 2 - How much, how fast and how far?</b> 2.1 How much? The amount of chemical change 2.2 How fast? The rate of chemical change 2.3 How far? The extent of chemical change
<b>Structure 3 - Classification of matter</b> 3.1 The periodic table: Classification of elements 3.2 Functional groups: Classification of organic compounds	<b>Reactivity 3 - What are the mechanisms of chemical change?</b> 3.1 Proton transfer reactions 3.2 Electron transfer reactions 3.3 Electron sharing reactions 3.4 Electron-pair sharing reactions

### Experimental programme

Practical work  
 Collaborative sciences project  
 Scientific investigation

### Potential Careers

It is often a prerequisite for many other courses in higher education, such as medicine, biological science and environmental science. Jobs directly related are analytical chemist, chemical engineer, forensic scientist, nanotechnologist, pharmacologist, and toxicologist. It helps build skills for analysis and problem-solving, monitoring/ maintaining records and data research and presentation.

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

The DP chemistry course is built on:

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

These three pillars support a broad and balanced experimental programme. As students' progress through the course, they become familiar with traditional experimentation techniques, as well as the application of technology. These opportunities

help them to develop their investigative skills and evaluate the impact of error and uncertainty in scientific inquiry.

The scientific investigation then places a specific emphasis on inquiry-based skills and the formal communication of scientific knowledge.

Finally, the collaborative sciences project extends the development of scientific communication in a collaborative and interdisciplinary context, allowing students to work together beyond the confines of chemistry.

## Assessment

Type of assessment	Format of assessment	Time (hours)		Weighting of final grade
		SL	HL	
External		3	4.5	80
Paper 1	<b>Paper 1A:</b> Multiple-choice questions <b>Paper 1B:</b> Data-based questions and questions on experimental work	1.5	2	36
Paper 2	Short answer and extended-response questions	1.5	2.5	44
Internal		10		20
Scientific investigation	The scientific investigation is an open-ended task in which the student gathers and analyses data in order to answer their own formulated research question. The outcome of the scientific investigation will be assessed through the form of a written report. The maximum overall word count for the report is 3,000 words.			20



# Physics

## Aims

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

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

## Overview

A relevant and effective physics education needs to reflect societal change with a greater focus on skills and the interconnectedness of concepts, contexts and content, and facilitate deep learning and student understanding.

The physics curriculum is grouped into five broad organizing themes, each of which are subdivided into several topics.



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## Skills in the Study of Physics

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<b>A Space, time and motion</b>	A.1 Kinematics A.2 Forces and momentum A.3 Work, energy and power A.4 Rigid body mechanics A.5 Galilean and special relativity
<b>B. The particulate nature of matter</b>	B.1 Thermal energy transfers B.2 Greenhouse effect B.3 Gas laws B.4 Thermodynamics B.5 Current and circuits
<b>C. Wave behaviour</b>	C.1 Simple harmonic motion C.2 Wave model C.3 Wave phenomena C.4 Standing waves and resonance C.5 Doppler effect
<b>D. Fields</b>	D.1 Gravitational fields D.2 Electric and magnetic fields D.3 Motion in electromagnetic fields D.4 Induction
<b>E. Nuclear and quantum physics</b>	E.1 Structure of the atom E.2 Quantum physics E.3 Radioactive decay E.4 Fission E.5 Fusion and stars

## Experimental programme

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Practical work  
Collaborative sciences project  
Scientific investigation

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

The DP physics course is built on:

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

These three pillars support a broad and balanced experimental programme. As students’ progress through the course, they become familiar with traditional experimentation techniques, as well as the application of technology. These opportunities

help them to develop their investigative skills and evaluate the impact of error and uncertainty in scientific inquiry.

The scientific investigation then places a specific emphasis on inquiry-based skills and the formal communication of scientific knowledge.

Finally, the collaborative sciences project extends the development of scientific communication in a collaborative and interdisciplinary context, allowing students to work together beyond the confines of Physics.

Assessment

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

Potential Careers

It is often a prerequisite for many other courses in higher education, such as engineering, aeronautical engineering, and astrophysics. Jobs directly related are particle physics, nanotechnology, meteorology, aerospace dynamics, atomic and laser physics, planetary physics, astronomy, and climate science. It helps build skills for analysis and problem-solving, monitoring/maintaining records and data research and presentation.

# Sports and Exercise Health Science

## Aims

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

## Overview

The SEHS forms part of group 4 and is offered at both standard (SL) and higher (HL) levels; The course incorporates the traditional disciplines of exercise physiology and nutrition of the human body, biomechanics and sports psychology and motor learning. You will cover a range of topics and carry out practical (experimental) investigations in both laboratory and field settings. This will provide an opportunity to demonstrate, understand and apply knowledge of facts, concepts, skills, and techniques as well as analyse, evaluate, synthesize experiential procedures, data and trends, patterns and predictions.

A Exercise Physiology	B. Biomechanics	C. Sports Psychology	Experimental Programme
<b>A.1</b> Communication <b>A.2</b> Hydration and Nutrition <b>A.3</b> Response	<b>B.1</b> Generating movement in the body <b>B.2</b> Forces, motion and movement <b>B.3</b> Injury	<b>C.1</b> individual Difference <b>C.2</b> Motor learning <b>C.3</b> Motivation <b>C.4</b> Stress and coping <b>C.5</b> Psychological skills	Including practical work, collaborative science project and scientific investigation. The outcome of the scientific investigation will be assessed through the form of a written report

## Assessment

Type of assessment	Format of assessment	Time		Weighting of final grade
		SL	HL	
<b>External</b>		<b>3</b>	<b>4.25</b>	<b>76</b>
<b>Paper 1</b>	Paper 1A Multi Choice Questions	1.5	1.75	36
	Paper 1B Data based questions and questions on experimental work	1.5	2.5	40
<b>Paper 2</b>	Short answer and extended response questions	1.5	2.5	40
<b>Internal</b>		<b>10</b>		<b>24</b>
<b>Scientific Investigation</b>	The scientific investigation is an open-ended task in which the student gathers and analyses data in order to answer their own formulated research question. The outcome of the scientific investigation will be assessed through the form of a written report. The maximum overall word count for the report is 3,200 words.	10		24

## Potential Careers

Sports, exercise and health science (SEHS) is an experimental science that combines academic study with the acquisition of practical and investigative skills. It is an applied science course within group 4, with aspects of biological and physical science being studied in the specific context of sports, exercise and health. Moreover, the subject matter goes beyond the traditional science subjects to offer a deeper understanding of the issues related to sports, exercise and health in the 21st century. Apart from being worthy of study in its own right, SEHS is a good preparation for courses in higher or further education related to sports fitness and health and serves as useful preparation for employment in sports and leisure industries.





# Computer Science



## Aims

1. Provide opportunities for study and creativity within a global context that will stimulate and challenge students developing the skills necessary for independent and lifelong learning.
2. Provide a body of knowledge, methods and techniques that characterize computer science.
3. Enable students to apply and use a body of knowledge, methods and techniques that characterize computer science.
4. Demonstrate initiative in applying thinking skills critically to identify and resolve complex problems.
5. Engender an awareness of the need for, and the value of, effective collaboration and communication in resolving complex problems.

6. Develop logical and critical thinking as well as experimental, investigative and problem-solving skills.
7. Develop and apply the students' information and communication technology skills in the study of computer science to communicate information confidently and effectively raise awareness of the moral, ethical, social, economic and environmental implications of using science and technology.
8. Develop an appreciation of the possibilities and limitations associated with continued developments in IT systems and computer science.
9. Encourage an understanding of the relationships between scientific disciplines and the overarching nature of the scientific method

## Overview

Computer science students should become aware of how computer scientists work and communicate with each other and with other stakeholders in the successful development and implementation of IT solutions. While the methodology used to solve problems in computer science may take a wide variety of forms, the group 4 computer science course emphasizes the need for both a theoretical and practical approach.

Assessment

	Internal Assessment	External Assessment
Standard Level	<p><b>Internal Assessment Project 30%</b></p> <p>Students focus on the solution to an issue by providing either an original product or additional functionality to an existing product for a client.</p>	<p><b>Paper 1: Core SL Topics 45%</b></p> <p>This paper consists of compulsory answer questions.</p> <p><b>Paper 2: Option: Databases 25%</b></p> <p>The purpose of the paper is to assess the student's ability to demonstrate the ability apply knowledge to construct, analyse and evaluate databases.</p>
Higher Level	<p><b>Internal Assessment Project 20%</b></p> <p>Students focus on the solution to an issue by providing either an original product or additional functionality to an existing product for a client.</p>	<p><b>Paper 1: Core SL Topics 40%</b></p> <p>This paper consists of compulsory answer questions.</p> <p><b>Paper 2: Option: Databases 20%</b></p> <p>The purpose of the paper is to assess the student's ability to demonstrate the ability apply knowledge to construct, analyse and evaluate databases.</p> <p><b>Paper 3: Case Study 20%</b></p> <p>Students demonstrate an understanding of the computer science concepts fundamental to the system(s) in the pre-issued case study.</p>



Potential Careers

Computer Science is one of those subjects which can open a number of different career paths, such as in Cyber security, Computer Networking, Telecommunication, Bio-Technology, Biometrics, Ecommerce, Database Management, Mobile Computing, Internet Technology and many more.

# Group 5:

# Mathematics

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

Mathematics is driven by abstract concepts and generalization. This mathematics is drawn out of ideas and develops through linking these ideas and developing new ones. These mathematical ideas may have no immediate practical application. Doing such mathematics is about digging deeper to increase mathematical knowledge and truth. The new knowledge is presented in the form of theorems that have been built from axioms and logical mathematical arguments and a theorem is only accepted as true when it has been proven. The body of knowledge that makes up mathematics is not fixed; it has grown during human history and is growing at an increasing rate.

The two mathematics courses available to Diploma Programme (DP) students express both the differences that exist in mathematics described above and the connections between them. These two courses might approach mathematics from different perspectives, but they are connected by the same mathematical body of knowledge, ways of thinking and approaches to problems. The differences in the courses may also be related to the types of tools, for instance technology, that are used to solve abstract or practical problems. The next section will describe in more detail the two available courses.

Individual students have different needs, aspirations, interests and abilities. For this reason, there are two different subjects in mathematics, each available at SL and HL. These courses are designed for different types of students: those who wish to study mathematics as a subject in its own right or to pursue their interests in areas related to mathematics, and those who wish to gain understanding and competence in how mathematics relates to the real world and to other subjects. Each course is designed to meet the needs of a particular group of students.



# Mathematics: Applications and Interpretations (HL Only)

## Aims

1. Develop mathematical knowledge, concepts and principles.
2. Develop logical, critical and creative thinking.
3. Employ and refine students' powers of abstraction and generalization.

## Overview

This course emphasises the applied nature of the subject and is designed for students who wish to understand how mathematics relates to the real world and to other subjects. The five topics below are covered during the SL and HL courses. Each of these topics has sub-topics with HL students covering some additional sub-topics or the same sub-topics at greater depth.

- Number and Algebra.
- Functions.
- Geometry and Trigonometry.
- Probability and Statistics.
- Calculus.

In addition to this the course contains investigative and inquiry-based learning, supporting the students in their internally assessed exploration task.

Mathematics: Applications and Interpretations has less emphasis on calculus, numerical and algebraic approaches than Mathematics: Analysis and Approaches, and more on the application of models and statistics.



Assessment

	Internal Assessment	External Assessment
Higher Level	<b>Mathematical Exploration Project</b> 20%	<b>Paper 1:</b> Calculator 30% <b>Paper 2:</b> Calculator 30% <b>Paper 3:</b> Calculator Extended response problem-solving 20%

Potential Careers

This course is suitable for students who may go on to further study in subjects that utilise mathematics in this way such as social sciences, natural sciences, statistics, business, psychology or design.





# Mathematics: Analysis and Approaches



## Overview

This course is designed for students who wish to study mathematics as a subject in its own right or to pursue their interests in areas related to mathematics. It will appeal to students who are interested in exploring real and abstract applications of mathematical concepts. They will enjoy problem solving and generalisation.

The five topics below are covered during the SL and HL courses. Each of these topics has sub-topics with HL students covering some additional sub-topics or the same sub-topics at greater depth.

- Number and Algebra.
- Functions.
- Geometry and Trigonometry.
- Probability and Statistics.
- Calculus.

## Aims

1. Develop mathematical knowledge, concepts and principles.
2. Develop logical, critical and creative thinking.
3. Employ and refine students' powers of abstraction and generalization.

In addition to this the course contains investigative and inquiry-based learning, supporting the students in their internally assessed exploration task.

Mathematics: Analysis and Approaches has a greater emphasis on calculus, numerical and algebraic approaches than the Mathematics: Applications and Interpretations course.



Assessment

	Internal Assessment	External Assessment
Higher Level	<b>Mathematical Exploration Project</b> 20%	<b>Paper 1:</b> Calculator 30% <b>Paper 2:</b> Calculator 30% <b>Paper 3:</b> Calculator Extended response problem-solving 20%
Standard Level	<b>Mathematical Exploration Project</b> 20%	<b>Paper 1:</b> Calculator 40% <b>Paper 2:</b> Calculator 40%



Potential Careers

This course is suitable for students who may go on to further study in subjects that have a significant level of mathematics content, for example mathematics itself, engineering, physical sciences or economics.

# Group 6: The Arts (or Elective)

When you study Music or Visual Art, you will spend time exploring diversity across time, places and cultures.

You will learn to express yourself with greater confidence and competence, and you'll develop perception, creativity and analytical skills. Your study

of the Arts will be the start of a lifelong relationship, and your ability to perceive a situation more deeply will stay with you, carrying over into other disciplines and changing the way you view the world.

***You can choose an elective [here](#). A second Science or Individuals and Societies Subject at HL or SL.***





# Visual Arts

## Aims

1. Enjoy lifelong engagement with the arts.
2. Become informed, reflective and critical practitioners in the arts.
3. Understand the dynamic and changing nature of the arts.
4. Explore and value the diversity of the arts across time, place and cultures.
5. Express ideas with confidence and competence.
6. Develop perceptual and analytical skills.
7. Make artwork that is influenced by personal and cultural contexts.
8. Become informed and critical observers and makers of visual culture and media.
9. Develop skills, techniques and processes in order to communicate concepts and ideas.

## Overview

The IB Diploma Programme visual arts course encourages students to challenge their own creative and cultural expectations and boundaries. It is a thought-provoking course in which students develop analytical skills in problem-solving and divergent thinking, while working towards technical proficiency and confidence as art-makers. In addition to exploring and comparing visual arts from different perspectives and in different contexts, students are expected to engage in, experiment with and critically reflect upon a wide range of contemporary practices and media. The course is designed for students who want to go on to study visual arts in higher education as well as for those who are seeking lifelong enrichment through visual arts.





Assessment

	Internal Assessment	External Assessment
Higher Level	<p><b>Exhibition 40%</b></p> <p>8–11 art pieces with exhibition text for each. Two exhibition photographs. A curatorial rationale (700 words maximum)</p>	<p><b>Process Portfolio: 40%</b></p> <p>13–25 screens. The submitted work should be in at least three different artmaking forms.</p> <p><b>Comparative Study: 20%</b></p> <p>Compare at least 3 different artworks, by at least 2 different artists, with commentary over 10–15 screens. Plus, a reflection on the extent to which their work and practices have been influenced by any of the art/ artists examined.</p>
Standard Level	<p><b>Exhibition 40%</b></p> <p>4–7 art pieces with exhibition text for each. Two exhibition photographs. A curatorial rationale (400 words maximum)</p>	<p><b>Process Portfolio: 40%</b></p> <p>9 – 18 screens. The submitted work should be in at least three different artmaking forms.</p> <p><b>Comparative Study: 20%</b></p> <p>Compare at least 3 different artworks, by at least 2 different artists, with commentary over 10–15 screens.</p>

Potential Careers

Fine Artist • Graphic Designer • Fashion Designer • Architect • Illustrator • Printmaker • Interior Designer • Animator • Advertising & Media • Film • Museum Curator • Art Therapist • Teacher • Multimedia Programmer • Visual Effects (VFX) Artist • Art Conservator • Art Historian • Art Critic



# Music

## Aims

1. Explore a range of musical contexts and make links to, and between, different musical practices, conventions and forms of expression.
2. Acquire, develop and experiment with musical competencies through a range of musical practices, conventions and forms of expression, both individually and in collaboration with others.
3. Evaluate and develop critical perspectives on their own music and the work of others.

## Overview

In this course, students and teachers engage in a journey of imagination and discovery through partnership and collaboration. Students develop and affirm their unique musical identities while expanding and refining their musicianship.

Throughout the course, students are encouraged to explore music in varied and sometimes unfamiliar contexts. Additionally, by experimenting with music, students gain hands-on experience while honing musical skills. Through realizing and presenting samples of their musical work with others, students also learn to communicate critical and artistic intentions and purpose.

As students develop as young musicians, the course challenges them to engage practically with music as researchers, performers and creators, and to be driven by their unique passions and interests while also broadening their musical and artistic perspectives.



Assessment

	Internal Assessment	External Assessment
Higher Level	<p><b>Experimenting with Music:</b> 20%</p> <p>Students submit an experimentation report with evidence of their musical processes in creating and performing in two areas of inquiry in a local and/or global context. The report provides a rationale and commentary for each process.</p> <p><b>The Contemporary Music Maker:</b> 30%</p> <p>Students submit a continuous multimedia presentation documenting their real-life project. Students submit multimedia presentation (maximum 15 minutes)</p>	<p><b>Exploring Music in Context:</b> 20%</p> <p>Students select samples of their work for a portfolio submission (maximum 2,400 words).</p> <p><b>Presenting Music:</b> 30%</p> <p>Students submit a collection of works demonstrating engagement with diverse musical material from four areas of inquiry.</p>
Standard Level	<p><b>Experimenting with Music:</b> 30%</p> <p>Students submit an experimentation report with evidence of their musical processes in creating and performing in two areas of inquiry in a local and/or global context. The report provides a rationale and commentary for each process.</p>	<p><b>Exploring Music in Context:</b> 30%</p> <p>Students select samples of their work for a portfolio submission (maximum 2,400 words).</p> <p><b>Presenting Music:</b> 40%</p> <p>Students submit a collection of works demonstrating engagement with diverse musical material from four areas of inquiry.</p>

Potential Careers

Studying music teaches you discipline, resilience, reflection and creativity. There are many transferrable skills within the IB Music course that universities and employers admire. Careers within the Music industry include but are not limited to, music production, music therapy, performer, composer, director, sound technician, event manager, radio producer and artist management.





# Leadership Opportunities in Haileybury Astana Sixth Form

## **Head Students**

These are roles of prominent representative student responsibility. Each year, Head students are selected by both students and staff. The role requires various school duties such as leading and presenting assemblies, school events, school tours as well as building and maintaining a strong Sixth Form Leadership Team that will motivate, inspire and listen to students from Year 7 to Year 13.

## **Sixth Form Leadership Team**

As an IB World School we are committed to enabling an active, creative, cross-cultural education. Within the Sixth Form Leadership Team, the 6 subject groups within the IB curriculum alongside the IB Core will be represented. Lead by the Head Girl and Head Boy, the Sixth Form Leadership Team will look for ways to enable collaboration across subjects and year groups.

## **School Council**

Here at Haileybury we give value to the student voice. Our student council has representatives from each year group so that concerns and ideas are heard from the whole senior school community. Members of the Sixth Form Leadership Team, Head Girl and Head Boy will play a key role in organising and chairing meetings, ensuring that motions are put forward.

## **CAS leaders**

CAS leaders aim to ensure the CAS ideology is embedded throughout the senior school. Their role involves promoting the CAS programme, so all students understand its value. The various projects will require differing roles of responsibility to ensure success. Skills such as positivity, public speaking, resilience and commitment will be improved throughout.

### **Young Enterprise**

An exciting opportunity to lead the Young Enterprise CCA at Haileybury Astana. This experience aims to embrace both a creative and business mindset in order to provide a service to the community. Leaders will be expected to support students involved to identify products or services that they can sell during Haileybury Day, with all proceeds going to charity. This is a great opportunity for students that are interested in running their own business or those that might choose to study business at university.

### **Event Management Team**

A chance to develop your organisational skills which are relevant to a wide range of future university and career paths. There are various events, celebrations and festivals in the school calendar and helping organise and run these will give you an opportunity to learn how to persuade and influence people, understand logistics, communicate effectively, delegate tasks and responsibilities and many more.

### **COBIS Global Social Leaders Catalyst**

The GSL World Catalyst has been curated for socially active and creative young people. During the course students will build leadership, future world of work skills and confidence. The course creates a global community where young people can share and discuss like-minded topics. The students will connect with students from other COBIS schools and learn how to launch successful projects in your community. After the leadership weekend participants will be invited to take on independent challenges. This 30-day period will be an opportunity for participants to take positive action and gain additional certificates that will be awarded during the virtual graduation event.

### **Financial Times Student Advocate Programme**

The Financial Times is offering one ambitious Year 12 student in each secondary school the chance to become a Student Advocate. Student Advocates will develop communication skills by representing the views of students to the Financial Times and promoting the advantages of reading the FT to their friends and teachers. Advocates will have the opportunity to become the voice of students so we can better understand their views, vision and ambitions. This placement runs from October to April.

### **Model United Nations (MUN)**

Model United Nations (MUN), embraced worldwide by schools and colleges, is an informative and engaging activity. Pupils take part in both national and international conferences simulating United Nations committees. Haileybury Astana organises and runs our own MUN event whereby student leaders are needed to guide and support participants as well as the logistics.

### **Eco Schools Group**

Eco Schools is an international programme of the Foundation for Environmental Education that aims to empower students to be the change our sustainable world needs. As a leader within this group, students will be tasked with finding engaging, action-orientated and socially responsible initiatives that senior school students can take part in order to contribute to the wider cause.

## School Newspaper

Take on the role of a writer, photographer, video editor, interviewer etc. Lead your peers and develop skills in marketing, advertising, graphics and meeting strict deadlines. A great opportunity to showcase both your creative and academic side.

## CIS Commit2Act

Commit to a better world! Small actions can have a big impact. Join other people like you in taking action for a better world, by signing on to commitments that align with the issues that matter to you. Keep track of your progress and get inspired by a community of youth changemakers.

## CIS Global Issues Network

The Global Issues Network (GIN) empowers young people to collaborate locally, regionally, and globally to create solutions for global issues. Each year, thousands of students worldwide engage in GIN-related activities. Any secondary-aged student is welcome to join.

## CIS Magical Moments Around the World

Magical Moments Around the World is a uniting of people all over the world by sharing special experiences in their lives in a global online travelling book. It's about creating a new spirit of coexistence among the various peoples, religions, and cultures. Share your own magical moment online or host the travelling book!

## CIS TakingITGlobal

TakingITGlobal's mission is to empower youth to understand and act on the world's greatest challenges. TakingITGlobal uses the power of online community to facilitate global education, social entrepreneurship, and civic engagement for millions of youths worldwide.





# University Courses

“Education is the most powerful weapon, which you can use to change the world”

*Nelson Mandela*

The online courses listed below are an excellent way to show universities that you are passionate about your subjects alongside exhibiting the IB Learner Profile traits and the ATL skills that universities and employers look for in their applicants.

These courses may change each term, but the following gives you a flavour of what has taken place in the past.



***Learning English for academic purposes: first step***

*Open University*

Develop the academic language and study skills you need to learn in English at university.

***Kick start your career: getting ahead at university***

*Queensland University of Technology*

Building a satisfying career is a lifelong process. Use this course to take the first step and start university on the front foot.

***Digital leadership: creating value through technology***

*University of Reading*

Digital technologies are changing extraordinarily quickly. This four-week course will introduce you to the new digital landscape.

***Football: more than a game***

*University of Edinburgh*

Explore the role of football in the world today – including finances, clubs, nations and rivalries – with this free online course.

***Starting a business 2: people and networks***

*University of Leeds*

Find out how working with people and exploring networks can help you take your business to the next level.

***Maps and the geospatial revolution***

*PennState University*

Learn to make maps and analyse geographic patterns using the latest geographic information systems (GIS) and cartographic tools.

***The internet of things***

*Kings College London*

Learn how IoT works, and how to create a successful product or company using it, with this online course.

***The musculoskeletal system: the science of staying active into old age***

*University of Sheffield, University of Liverpool, University of Newcastle*

Demystify the ageing process and learn how our everyday behaviours are likely to affect our long-term musculoskeletal health.

***Building a future with robots***

*University of Sheffield*

Explore the role of robots and autonomous systems in the factories, homes, hospitals, schools and cars of our near future.

***Data to insight: an introduction to data analysis***

*The University of Auckland*

A hands-on introduction to statistical data analysis and visualisation emphasizing key ideas and analytic tools.

***Planetary urbanisation: global challenges in a changing world***

*University College Dublin*

Whether you live in a city or not, urbanisation affects you. Learn more about the impact and challenge of urbanisation worldwide.

***Forensic Psychology: Witness Investigation***

*Open University*

Discover how psychology can help obtain evidence from eyewitnesses in police investigations and prevent miscarriages of justice.

You can find many more courses like this at [www.futurelearn.com](http://www.futurelearn.com)

# Summer Programmes

The following list gives you some ideas about what is on offer in terms of summer programmes that are offered around the world.

## ***Pre-College Programs and Online Course in Los Angeles***

*University of California, Los Angeles • University of Southern California*

UCLA offers a wide variety of online courses, summer academic courses, and programs in areas like ESL, nanoscience, dance/ performing arts, digital filmmaking, business and Model United Nations.

<https://www.summer.ucla.edu/internationalhsstudent>

## ***College Immersion Programs for High Schoolers in New York City***

*Columbia University • New York University*

Columbia offers high school students intensive 3-week courses in NYC and Barcelona, as well as opportunities to take courses for university credit. NYU offers a month-long program in business and finance, among many other opportunities. Barnard offers programs especially for young women in a huge variety of fields.

<http://sps.columbia.edu/highschool>

## ***Summer Art Programs in Boston***

*Massachusetts College of Art and Design • Lesley University*

Art schools like MassArt offer intensive and studio programs for students in summer.

<https://massart.edu/youth-programs>

## ***Pioneer Academics: Online Summer Research Program***

This online program places you under the mentorship of a distinguished professor who mentors you through a college-level research project.

<https://pioneeracademics.com/index.php>

## ***Iacocca Global Entrepreneur ship Intensive in Pennsylvania***

*Lehigh University*

This summer program brings American and International High School students together for 4 weeks to study entrepreneurship, globalization, team building, project management, leadership and working in a culturally diverse environment.

<https://global.lehigh.edu/iacocca-institute/high-school>





### ***Summer Camps at Embry-Riddle Aeronautical University, Florida***

This university offers numerous summer programs and camps in the areas of flight, engineering, robotics, safety and security intelligence, space, academics, and athletics.

<https://summercamps.erau.edu/camps>

### ***Animal Science: Captive Raptor Management***

Learn how to care for and manage birds of prey based on traditional methods as well as modern principles of Animal Science and Veterinary Medicine in this 3-week course at Cornell University in New York.

<https://www.sce.cornell.edu/sc/programs/index.php?v=169>

### ***International Summer School for Young Physicists (Canada)***

*Lehigh University*

The ISSYP is an exciting and challenging two-week program for Canadian and international high school

students who have a keen interest in theoretical physics and pursuing physics studies at the university level.

<https://perimeterinstitute.ca/issyp>

### ***The Summer Science Program***

This prestigious pre-college summer science program (co-sponsored by MIT, University of Colorado Boulder, Caltech, and New Mexico Institute of Technology) provides students with the opportunity to immerse themselves in a central research project in either astrophysics or biochemistry. In the astrophysics program, teams observe various astronomical patterns to determine the orbit of a near-earth asteroid, while in the biochemistry program, teams design a small molecule that can inhibit an enzyme from a fungal crop pathogen.

<https://summerscience.org/>

### ***San Francisco Art Institute pre-college***

This four-week, four college credit program combines in-depth study and practice with SFAI's renowned faculty to help you build foundational skills, develop a portfolio, experiment with new media, and collaborate with like-minded peers who are driven to create.

Visits to local museums and exhibition opportunities complement this immersive experience.

<http://www.sfai.edu/public-youth-education/precollege>

### ***Boston College Business and Leadership Program***

Rising juniors and seniors can spend six weeks of summer taking part in the Boston College Experience Honors program. This comprehensive program allows students to experience life as a college student while taking two undergraduate courses and even earning six college credits. Business-themed courses include Public Speaking, Principles of Economics, Organizational Behaviour, and more.

### ***Summer Programs at Loyola Marymount University (Los Angeles, California)***

LMU'S two-week residential immersion programs are designed in close partnership with LMU's renowned undergraduate faculty to help high school students explore academic passions, evolve as individuals, and discover what it means to have the heart of an LMU Lion.

<http://summer.lmu.edu/>

### ***Corporate Law Pre-College Summer Program at Syracuse University (New York)***

Syracuse University offers a wide variety of summer programs. This corporate law focused program sees students creating a real-life entrepreneurial business plan, participating in business-related Mock Trials, and touring different "funky" downtown businesses over two weeks. Students will also learn about addressing actual corporate concerns, from raising capital to staffing a workforce, paying taxes and competing in the marketplace.





# Haileybury Astana

[www.haileybury.kz](http://www.haileybury.kz)

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Haileybury Astana is committed to safeguarding in all aspects of education.

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