

# International Baccalaureate Diploma Programme

Course Catalogue 2019-2020



Maturitätsausweise durch  
den Kanton Zug anerkannt

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### Abbreviations:

CAS	Creativity, Activity, Service
DP	Diploma Programme
EE	Extended Essay
HL	Higher Level
IB	The International Baccalaureate
SL	Standard Level
TOK	Theory of Knowledge

Information regarding the IB Diploma Programme and specific courses contained in this catalogue are taken directly from the IBO website. [www.ibo.org/programmes/diploma-programme/](http://www.ibo.org/programmes/diploma-programme/)



## 1. Introduction to the IB Diploma Programme

The International Baccalaureate Diploma Programme aims to provide a broad and demanding education for students aged 16 to 19. This two-year course results in a diploma that is widely recognised and is accepted as a qualification for entry into institutions of higher education around the world.

The IB Mission Statement is as follows:

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

To this end, the organisation works with schools, governments and international organisations to develop challenging programmes of international education and rigorous assessment.

These programmes encourage students across the world to become active, compassionate and lifelong learners who understand that other people, with their differences, can also be right.

The IB Diploma Programme is an academically challenging programme with a holistic approach to education. It promotes the education of the whole person, emphasising intellectual, personal, emotional and social growth through all domains of knowledge. The mission statement outlined above has been translated into a series of learning outcomes, characteristics that are developed in IB Diploma students, known as the *IB Learner Profile*.

### 1.1. According to the IB Learner Profile, IB learners strive to be:

Inquirers	They develop their natural curiosity. They acquire the skills necessary to conduct inquiry and research and show independence in learning. They actively enjoy learning and this love of learning will be sustained throughout their lives.
Knowledgeable	They explore concepts, ideas and issues that have local and global significance. In so doing, they acquire in-depth knowledge and develop understanding across a broad and balanced range of disciplines.
Thinkers	They exercise initiative in applying thinking skills critically and creatively to recognise and approach complex problems, and make reasoned, ethical decisions.
Communicators	They understand and express ideas and information confidently and creatively in more than one language and in a variety of modes of communication. They work effectively and willingly in collaboration with others.
Principled	They act with integrity and honesty, with a strong sense of fairness, justice and respect for the dignity of the individual, groups and communities. They take responsibility for their own actions and the consequences that accompany them.
Open-minded	They understand and appreciate their own cultures and personal histories, and are open to the perspectives, values and traditions of other individuals and communities. They are accustomed to seeking and evaluating a range of points of view, and are willing to grow from the experience.
Caring	They show empathy, compassion and respect towards the needs and feelings of others. They have a personal commitment to service, and act to make a positive difference to the lives of others.
Risk-takers	They approach unfamiliar situations and uncertainty with courage and forethought, and have the independence of spirit to explore new roles, ideas and strategies. They are brave and articulate in defending their beliefs.
Balanced	They understand the importance of intellectual, physical and emotional balance to achieve personal well-being for themselves and others.



Reflective They consider their own learning and experience. They can assess and understand their strengths and limitations in order to support their learning and personal development.

## 2. The IB Diploma Programme at Institut Montana Zugerberg

Prior to beginning the IB Diploma Programme at Institut Montana Zugerberg, a student's assessment of their own capabilities, strengths and interests needs to be matched to the various courses, subjects and levels in consultation with their teachers and the college counsellor. All teachers will offer recommendations and students are encouraged to discuss their choices with their parents, college counsellor and IB Coordinator to formulate the best course of studies for them. Additionally, acceptance to some university programmes in certain countries require specific subjects. Therefore, IB subject choices need to be considered carefully.

This course catalogue, which provides insights into the courses offered, is aimed at prospective students and should help them in making the right subject choices.

Over the course of the two-year programme, students:

- Study six subjects chosen from the six subject groups
- Participate in Creativity, Activity, Service (CAS)
- Follow a Theory of Knowledge course (TOK)
- Complete an Extended Essay (EE)



The IB Diploma Programme Curriculum Model (on the right) shows the six subject groups.

Of the six academic subjects, a student will take three at higher level and three at standard level. Five of these subjects must be chosen from different subject groups (Groups 1-5: Language A, Second language, Individuals and Societies, Sciences, Mathematics). The sixth subject may either be chosen from Group 6 (the Arts) or from any subject in groups 1, 2, 3 and 4.

IB Diploma students must also participate in the three core requirements, namely a program of Creativity, Activity, Service, a course entitled Theory of Knowledge, and write an Extended Essay based on their own research. More information regarding these core requirements is included in this guide.

### How should a student choose their academic subjects?

When choosing their academic subjects, a student must consider the following:

- What subjects they enjoy;
- What subjects they are capable of passing;
- Their future career plans;
- College and university requirements.

Before registering for subjects, students should discuss options with teachers, the IB Coordinator and the college counsellor, talk to students already engaged in IB coursework, examine IB textbooks and reflect on college and university prospectuses. Please note that courses will only be offered if chosen by at least 4 students. Otherwise, the school reserves the right to cancel the course or charge additional fees.



Students should also consider the following:

The approach to and content of subjects at the IB level may significantly differ from a student's existing or past experiences.

Some combinations of subjects are complementary; they support each other both in study and as qualifications for further study.

The selection of specific subjects is outlined on the Institut Montana Zugerberg IB subject choice form; not all course combinations are possible.

More than half of university graduates secure positions that are not directly related to their academic degree. IB subject choices should thus not be viewed as merely vocational or job directed.

### **Who qualifies for the IB Diploma Programme?**

To be eligible for the IB Diploma Programme, students need to reach an average of at least 4 in Grade 10, excluding their grades for PE. All other requirements and conditions for specific courses stated in the *Institut Montana Zugerberg Promotion Policy* need to be fulfilled as well as recommendations for their courses from their teachers. These requirements are in part as follows:

Students must maintain a GPA of 5 or an IGCSE grade of C for HL subjects and a GPA of 4.0 or an IGCSE grade D for SL subjects.

Students with a GPA of 4 - 4.5 will be put on probation for the first grading period in grade 11 and must maintain a grade 4 average in each subject to continue with the full diploma.

Students who do not meet these criteria can pursue IB courses in individual subjects and a US High School Diploma.

Additionally, to study at the IB level at Institut Montanan Zugerberg, a student must demonstrate:

Respect for their colleagues, as well as the work and social ethos of the school

Competence in a majority of their six subject choices

The maturity to take responsibility for their future study.

Succeeding in the IB Diploma Programme requires discipline. To be successful, students need to learn how to learn, to show initiative and leadership, and to work well in a team. Unquestionably, being a good IB Diploma candidate is not merely a matter of maintaining respectable grades in academic subjects. The programme aims at encouraging students to be mature, responsible and creative. CAS, sports, drama and other school activities provide ample opportunities for students to develop fully and holistically. Such education of the whole person does not only benefit IB candidates, but it also benefits students when applying for higher education and career opportunities later in life; it is the foundation of life-long learning.

### **How is the IB Diploma assessed?**

Students will engage in both internal and external assessment that varies among the academic disciplines. Internal assessment is graded by a teacher at Institut Montana Zugerberg and moderated by an IB examiner. External assessment is graded by an IB examiner.

For each of the three higher level and three standard level subjects, a student can score up to seven points, adding up to a possible forty-two points. An additional one to three points may be earned for the Extended Essay and Theory of Knowledge, making 45 points the maximum score a student can achieve.

A diploma is generally awarded when a student achieves 24 points. There are, however, certain other conditions which must be met. For example, to earn a diploma, a student must gain 12 points in their HL subjects. Candidates must pass both the Extended Essay and the Theory of Knowledge course. A full list of conditions will be distributed to the students at the beginning of the course.



### 3. The US High School Diploma and IB Courses

In addition to the IB Diploma, students at IMZ will also be offered the chance to gain a US High School Diploma. This diploma considers grades over four years, including grade 11 and 12.

At Institut Montana Zugerberg, the IB Diploma may be too challenging for a student and therefore they are recommended to do the US High School Diploma with IB courses programme. Students working towards the US High School Diploma may choose up to six IB course subjects at the Standard Level. They will do all internal assessments and examinations in these subjects and receive individual course certificates from the IBO. IB course students are strongly encouraged to participate in the CAS programme (but are not required to do so). As neither the TOK course nor completion of the Extended Essay are compulsory, many IB course students excel since the workload and subject areas are well-tailored to their abilities. Good IB course scores as well as a strong academic record during the entire four years will facilitate entry into many US universities. It is important to note that most European universities will require an IB Diploma, however, the college counsellor will provide guidance to possibilities for further education with the US High School Diploma.

### 4. Subjects Available at Institut Montana Zugerberg

Group 1	Language A HL/SL: Literature (offered in English, Spanish, Chinese, Italian and Russian) Language A SL: Literature (School-Supported Self-Taught) Language A HL/SL: Language and Literature (offered in English and German)
Group 2	Language B HL/SL (offered in French, English, German, Spanish) Language ab initio SL (offered in German)
Group 3	Business Management HL/SL Economics HL/ SL History HL/SL Geography HL/ SL
Group 4	Biology HL/ SL Chemistry HL/ SL Physics HL/ SL
Group 5	Mathematics: analysis and approaches HL/SL Mathematics: applications and interpretations HL/SL
Group 6	Visual Arts HL/SL or any one of the above subjects (groups 1-4) dependent upon timetable compatibility
Core Requirements	CAS, TOK and Extended Essay



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## Group 1

### Language A: Literature HL-SL (offered in English, Chinese, Spanish, Russian, Italian)

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Through the study of a wide range of literature, the Language A: Literature course encourages students to appreciate the artistry of literature and to develop an ability to reflect critically on their reading. Works are studied in their literary and cultural contexts, through close study of individual texts and passages, and by considering a range of critical approaches. In view of the international nature of the IB and its commitment to intercultural understanding, the Language A: Literature course does not limit the study of works to the products of one culture or the cultures covered by any one language; therefore, the study of works in translation is especially important in introducing students, through literature, to other cultural perspectives. The response to the study of literature is through oral and written communication, thus enabling students to develop and refine their command of the language.

The study of literature can be relevant to a variety of higher education courses and careers and is particularly useful for: economics, law, medicine, history, anthropology, literature, gender studies, political science, educational careers and many more areas.

#### **Internal Assessment During the Two-Year Course *HL/SL***

Individual oral commentary and discussion (15% of final IB grade)

Individual oral presentation (15% of final IB grade)

#### **External Assessment at the End of the Two-Year Course *HL/SL***

Exam Paper 1: HL - Literary commentary; SL - Guided literary analysis (20% of final IB grade)

Exam Paper 2: Essay (25% of final IB grade)

Written assignment: Reflective statement and literary essay (25% of final IB grade)

#### **Prerequisites**

Students entering this course should have a solid command of the A language, although the chosen course need not be in their first language. Students should have read and analysed unabridged literature in language A, have some knowledge of literary genres and literary terminology, should speak the language fluently, and have a wide range of everyday and academic vocabulary in language A. EAL students who wish to take English Literature must take the IGCSE extended EAL examination and score either an A\* or A.



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## Language A: Language and Literature HL-SL (offered in English and German)

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The IB Language A: Language and Literature course is based on the study of language, culture, and literature. A key aim of the course is to encourage students to question the meaning generated by language and texts, which, it can be argued, is rarely straightforward and unambiguous. Helping students to focus closely on the language of the texts they study and to become aware of the role of each text's wider context in shaping its meaning is central to the course. Language skills such as reading, listening, speaking, and writing will be reinforced and refined.

The culture(s) of the language, and connections between other languages will be explored in depth. A variety of text types (fiction, non-fiction, image-as-text) from a variety of media will be analysed, compared, contrasted, and produced. A minimum of 6 (at HL) or 4 (at SL) literary works (in the language and world literature) will be studied. Students will examine the language, form, and content of these literary works, and investigate their cultural specificity as well as the elements that make them universal.

The study of language and literature can be relevant to a variety of university disciplines and careers. It is particularly useful for the study of: literature, linguistics, history, political science, film and cultural studies, anthropology, gender studies, law, media and communication studies, journalism, creative writing, advertising, and many more.

### Internal Assessment During the Two-Year Course HL/SL

Individual Oral: Throughout the course and with the guidance of their teacher, students prepare a discussion of one literary and one non-literary text, examining the ways in which a global issue of their choice is presented through the content and form of the two texts. This discussion is recorded. (30% of final IB grade at HL, 20% at SL)

### External Assessment at the End of the Two-Year Course HL/SL

- Exam Paper 1: Analysis of two (HL) or one (SL) unseen non-literary texts of both verbal and visual nature (e.g. a comic strip.) (25% of final IB grade at HL, 35% at SL)
- Exam Paper 2: Essay based on at least two of the literary texts studied. (25% of final IB grade at HL, 35% of final IB grade at SL)
- HL Essay: 1200-1500 words formal essay completed during the course, following a line of inquiry of students' own choice into one of the literary or non-literary texts studied.

### Prerequisites

Students entering this course should have a good command of the A language, although the chosen course need not be in their first language. Students should have read and analysed unabridged literature in language A, have some knowledge of literary genres and literary terminology, have studied and produced different text types (e.g. essay, formal letter, article, diary entry), should speak the language fluently, and have a wide range of everyday and academic vocabulary in language A. EAL students who wish to take English A: Language and Literature must take the IGCSE extended EAL examination and score either an A\* or A.



## Self-Taught A Literature SL

*Please read this in conjunction with the Language A: Literature SL course description.*

The school-supported self-taught (Language A: Literature) course provides students with the opportunity to explore and analyse in some depth the literature of their mother tongues and some world literature in an independent setting. Students meet once a week with a Language A: Literature teacher who provides them with assistance in specific aspects of their studies. Self-taught students are consequently equipped with the information and skills necessary for carrying out the written assignment task, and for answering questions on examinations. Students will also receive guidance both in choosing extracts in preparation for their recorded oral work and in the procedures for recording this work.

### External Assessment

Students are required to present a 10-minute oral commentary. The individual oral commentary is a literary analysis of an extract taken from one of the works studied in part 2 of the syllabus. Students are also required to complete an individual oral presentation on one or more of the part 4 works studied. The oral presentation, approximately 10 minutes in length, should take the form of a discussion of two works. Students may take prepared notes into the examination and these notes are sent to the examiner, along with the recording. The notes must be the main points only, not the full text of a talk. (15% for the commentary and 15% for the presentation of the final IB grade).

Self-taught students will have their orals recorded by their teacher and sent to an examiner for assessment. The self-taught program of study is assessed entirely by an external examiner appointed by the IB.

### *Written Examination Papers and a Written Assignment*

Two examination papers are set and assessed externally. They are designed to allow students to demonstrate their competencies in relation to the Language A: Literature assessment objectives and to specific parts of the syllabus.

Exam Paper 1: contains two previously unseen passages and students are instructed to write a guided literary analysis on one of these passages. A guided literary analysis in this context refers to an interpretation of the passage supported by two guiding questions. One passage will be poetry; the other passage will be taken from works such as: a novel or short story, a play, an essay, a biography, or a journalistic piece of writing of literary merit. (20% of final IB grade)

Exam Paper 2: contains three essay questions for each literary genre represented on the PLA of the language A being examined. Students answer one essay question only. The essay is written under examination conditions, without access to the studied texts. Each question directs students to explore the ways in which content is delivered through the conventions of the selected genre. Students are required to compare and contrast the similarities and differences between at least two of the works studied in part 3 of the course. (25% of final IB grade)

The written assignment is based on a work in translation studied in part 1 of the course. Students produce an analytical essay with reflective statement, undertaken during the course and externally assessed. The goal of this task is to assist students in producing individual, well-informed essays. (25% of final IB grade)

### Prerequisites

Students entering our school-supported self-taught course should have a good command of their native language. They should speak and write the language fluently and have both a wide range of everyday vocabulary and academic vocabulary.



Additionally, students should have read and analysed unabridged literature in their native language, have some knowledge of literary genres and literary terminology, and have studied and produced commentary writing, particularly detailed and comparative commentaries. They should be self-disciplined and willing to work independently.

### **Tutor (Distant or Local)**

Students taking our school-supported self-taught course are required to secure a tutor in their mother tongue. A tutor may have the following responsibilities:

Assisting the student in setting up a program of studies (especially mother tongue texts)

Providing suggestions for works of literary value (in the case of special request languages where no prescribed book list is available)

Providing the student with resources related to the texts, (in their mother tongue)

Providing the student with mother tongue guidance (discussion of content, language, conventions, structure, and so on) for the various parts of the course of studies

Setting and providing feedback on mock examinations and on practice papers/orals

Maintaining contact with the supervisor and regularly providing information on the student's progress

### **Additional Information**

Languages currently available at self-taught are: Amharic, Arabic, Bosnian, Bulgarian, Catalan, Chinese, Croatian, Czech, Danish, Dutch, Finnish, Filipino, Hebrew, Hindi, Hungarian, Indonesian, Italian, Japanese, Korean, Latvian, Lithuanian, Macedonian, Malay, Modern Greek, Nepali, Norwegian, Persian, Polish, Portuguese, Russian, Serbian, Sesotho, Sinhalese, Slovak, Slovene, Spanish, Swahili, Swedish, Thai, Turkish, and Welsh.

**Please note:** For all other languages, a special request will be sent to the IB organisation by the IB coordinator.



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## Group 2

### Language B HL-SL (offered in English, German, French and Spanish)

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The course is based around five prescribed themes: Identities; Experience; Human Ingenuity; Social Organisation; Sharing the Planet.

The study of these themes aims to help students 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. A key aim of the language B course is to develop international-mindedness through the study of language, culture, as well as ideas and issues of global significance. Explicit links to TOK strengthen the ability to communicate in the target language by increasing students' self-awareness as inquirers in their own language learning process. As appropriate to the level of the course, communication skills are reinforced through the other categories of approaches to learning skills: thinking, research, social and self-management skills.

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. SL and HL are differentiated by the recommended number of teaching hours, the depth of syllabus coverage, the study of literature at HL, and the level of difficulty and demands of assessment and assessment criteria. Language B will give students the opportunity to significantly improve their reading, writing, listening, and speaking skills. Please note that some university courses may not accept a language at the B level.

#### Internal Assessment Completed in the Second Year of the Course

Individual Oral – Based on an extract of one of two literary works (HL) or on a visual stimulus related to one of the prescribed themes (SL) studied during the course (25% of final IB grade)

#### External Assessment at the End of the Two-Year Course

Exam Paper 1: Productive skills – A choice from three tasks with a variety of audiences, contexts and purposes. Each task is based on a different theme from the syllabus. Students write a response of 450–600 (HL) or 250–400 (SL) words to one of the tasks, choosing a text type from among those listed in the examination instructions. (25% of final IB grade)

Exam Paper 2: Receptive skills – Two separate sections: listening (three audio passages) and reading (three written passages) covering different topics drawn from the five themes. (50% of final IB grade)

#### Prerequisites

Language B is a course designed for students with some previous learning of the language they study. The focus of the course is on language acquisition and development of language skills. All final decisions on the appropriateness of the course for which students are entered are taken by the IB Coordinator and the administration, in liaison with teachers.



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## Language Ab initio SL (offered in German)

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The IB Diploma Ab Initio course is designed for students who have little or no prior knowledge of German. In the two years of the course, the students will achieve A2 level of German according to the GER/CEFR (Common European Framework of Reference for Languages). The passive knowledge of German will be slightly higher as the external assessment requires understanding of real-life texts and deducing the meaning of words from their context, understanding grammatical structures and functions in context, being aware of the cohesive devices that give coherence to a text.

The language Ab Initio course is organised into five themes: Identities; Experiences; Human Ingenuity; Social Organisation; Sharing the Planet.

These themes allow students to compare the target language and culture(s) to other languages and cultures with which they are familiar. The themes also provide opportunities for students to make connections to other disciplinary areas in the DP.

The German Ab Initio course seeks to enhance intercultural understanding. By the end of the course, students will be able to make a link between their mother language and the new language. Students may reflect on the ways in which we know and learn our first language(s) compared to a newly acquired one. Furthermore, students will consider the differences in learning a language through a textbook as compared to learning through interaction only. And finally, students may consider whether through learning another language they understand the world differently.

Students develop their productive and receptive skills through using a range of materials to supplement the core course book. Furthermore, they are encouraged to be aware of the world around them and to use the advantage of living in a German-speaking country to help them to expand their language knowledge.

### **Internal Assessment During the Two-Year Course**

Individual oral based on a visual stimulus followed by a general conversation about at least one additional course theme. (25% of the final IB grade)

### **External Assessment at the End of the Two-Year Course**

Exam Paper 1: Productive skills - Two writing exercises, 70-150 words each from a choice of three tasks. (25% of the final IB grade)

Exam Paper 2: Receptive skills — reading and listening (50% of the final IB grade)

### **Prerequisites**

None.



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### Group 3

#### Business Management HL-SL

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Business management is a rigorous, challenging and dynamic discipline. This course is designed to develop students' knowledge and understanding of business theories, as well as to apply a range of tools and techniques to case studies. Students learn to analyse, discuss and evaluate business activities at local, national and international levels. The course covers a range of organisations from all sectors, as well as the socio-cultural and economic contexts in which those organisations operate.

This study of business management intends to provide an understanding of principles of economics, the nature of businesses, the role of entrepreneurs in economy, essential of economic policy and regulation, globalisation of business environment and fundamentals of business strategy. The business management course will help students develop a wide range of skills and understanding that will be directly relevant to anyone considering a career in business or studying a business-related course in higher education.

#### Summary of the Two-Year Course Content

Business organisation and environment  
Human resource management  
Finance and accounting  
Marketing  
Operations management

#### Internal Assessment During the Two-Year Course

*HL* – Students write a report that addresses an issue facing an organisation or analyses a decision to be made by an organisation. (25% of final IB grade)

*SL* – Students produce a written commentary based on three to five supporting documents about a real issue or problem facing an organisation. (25% of final IB grade)

#### External Assessment at the End of the Two-Year Course

Exam Paper 1:            Structured questions on all topics (HL 35% / SL 40% of final IB grade)

Exam Paper 2:            Structured questions on all topics (HL 35% / SL 40% of final IB grade)

#### Prerequisites

No specific subject requirements are necessary for students to take the business management course, however the ability to collate, process and analyse data would be beneficial.



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## Economics HL-SL

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Economics is a dynamic and analytical social science that empowers students to understand the world around them from an economic perspective. They will learn to understand economic phenomena that affect their lives, such as changes in exchange rates, as well as links between politics and economics.

DP economics is well suited for both those who are planning to further their studies in economics, business or politics at the tertiary level, and those who want a solid core knowledge of economics to then further their studies in other areas. The HL course places more emphasis on use of mathematics in economics, giving students a taste of what studying economics at the university level is like. The HL course is also highly useful for students considering studying business in higher education, giving them an opportunity to learn key concepts and skills already in high school.

### Summary of the Two-Year Course Content

#### *Knowledge:*

Microeconomics; Macroeconomics; International Economics; Development Economics.

#### *Skills:*

Demonstrate application and analysis of knowledge and understanding, including application of economic concepts and theories to real-world situations and interpretation of economic data.

Demonstrate synthesis and evaluation skills: ability to examine economic concepts and theories, to use these to construct and present an argument and to evaluate economic information and theories.

Select, use and apply a variety of appropriate skills and techniques: producing well-structured written material, using appropriate economic terminology; using correctly labelled diagrams to help explain economic concepts and theories; selecting, interpreting and analysing appropriate extracts from the news media and basic statistics.

Use quantitative techniques to identify, explain and analyse economic relationships (HL only).

### Internal Assessment During the Two-Year Course

Students produce a portfolio of three commentaries (each up to 750 words) based on different sections of the syllabus and on published extracts from the news media (20% of final IB grade)

### External Assessment at the End of the Two-Year Course

Exam Paper 1: An extended response (essay) paper (HL 30%, SL 40% of final IB grade)

Exam Paper 2: A data response paper based on articles and statistics (HL 30%, SL 40% of final IB grade)

Exam Paper 3: HL extension paper focused on quantitative techniques (20% of final IB grade)

### Prerequisites

No background in terms of specific subjects studied required. The ability to understand and explain abstract concepts and the ability to write in a logically structured manner are distinct advantages in economics. At HL, students need basic mathematical skills (e.g. linear equations, calculating areas in a diagram, percentage change and indices).



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## History HL-SL

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History is a dynamic, contested, evidence-based discipline that involves an exciting engagement with the past. It is a rigorous and intellectual discipline, focused around key historical concepts such as change, causation and significance. History is an exploratory subject that fosters a sense of inquiry. It is also an interpretive discipline, allowing opportunity for engagement with multiple perspectives and a plurality of opinions. Studying history develops an understanding of the past, which leads to a deeper understanding of the nature of humans and of the world today. The DP history course is a world history course based on a comparative and multi-perspective approach to history. It involves the study of a variety of types of history, including political, economic, social and cultural, and provides a balance of structure and flexibility. Students taking history at HL are also required to undertake an in-depth study of three topics from European history.

The course emphasises the importance of encouraging students to think historically and to develop historical skills as well as gaining factual knowledge. During this course, students will develop an understanding of multiple interpretations of history, analytical skills, critical analysis of sources of evidence and essay writing. In this way, the history course involves a challenging and demanding critical exploration of the past.

IB history students can develop several analytical and evaluative skills which will be useful beyond school. History is also very much seen as a top subject which universities and employers hold in it high regard. Students who enjoy history may continue their education in disciplines such as: political science, law, journalism, business, and many more.

### Summary of the Two-Year Course Content

Students will focus on the rise and consolidation of Authoritarian States in the 20<sup>th</sup> Century and 20<sup>th</sup> Century Conflicts. Case studies will include: the Weimar Republic and Hitler's Germany, Mao's China, the First World War, and the origins of the Chinese Civil War 1927-1950. HL students will also study Spain in the interwar years 1918-1939 including a study of the Spanish Civil War. All students will also study Japanese, Italian and German expansionism in the 1930's.

### Internal Assessment During the Two-Year Course

Students undertake a historical investigation on any area of the syllabus (HL 20%, SL 25% of final IB grade).

### External Assessment at the End of the Two-Year Course

Exam Paper 1: A source-based paper with four structured questions. (HL 20%, SL 30% of final IB grade)

Exam Paper 2: Two essay questions (HL 25%, SL 45% of final IB grade)

Exam Paper 3: Three essay questions (HL only - 35% of final IB grade)

### Prerequisites

It is recommended that students have studied IGCSE history. If so, students would usually be expected to have scored a Grade 'B' or above before embarking on IB history at SL or HL. Students who have not studied IGCSE history, but in other programmes such as a high school diploma, would ideally have scored around Grade '5' or above in history in Grade 10. Due to the literary nature of the subject, students require a good level of written and spoken English.



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## Geography HL-SL

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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 us to explain the similarities and differences between places. These may be defined on a variety of scales and from the perspectives of a different range of actors, with varying powers over decision-making processes.

Within individuals and societies, geography is distinctive in its spatial dimension and occupies a middle ground between social or human sciences and natural sciences. The DP geography course integrates physical, environmental and human geography, and ensures that students acquire elements of both socio-economic and scientific methodologies. Geography takes advantage of its position to examine relevant concepts and ideas from a wide variety of disciplines. This helps students develop life skills and have an appreciation of, and a respect for, alternative approaches, viewpoints and ideas. Geography students develop a wide range of marketable skills and are well equipped for careers in business management, marketing, public administration, human resources, tourism and environmental agencies.

### Summary of the Two-Year Course Content

All students study geographic perspectives regarding global change with the following themes: Population Distribution—Changing Population; Global Climate—Vulnerability and Resilience; Global Resource Consumption and Security.

HL students will study geographic perspectives about global interactions with the following themes: Power, Places and Networks; Human Development and Diversity; Global Risks and Resilience.

From seven possible geographic themes, two options are studied at SL, and three at HL, including: Freshwater—Drainage Basins; Oceans and Coastal Margins; Extreme Environments; Geophysical Hazards; Leisure, Tourism and Sport; Food and Health; Urban Environments.

### Internal Assessment During the Two-Year Course

Students conduct fieldwork, leading to one written report based on a fieldwork question, information collection and analysis with evaluation. (HL 20%, SL 25% of final IB grade)

### External Assessment at the End of the Two-Year Course

- Exam Paper 1: Each option has a structured question and one extended answer question from a choice of two. (HL/SL 35% of final IB grade)
- Exam Paper 2: Structured questions, some based on infographic or visual stimuli, and an extended answer question (HL 25%, SL 40% of final IB grade)
- Exam Paper 3: Three extended answer questions (HL only - 20% of final IB grade)

### Prerequisites

The geography course requires no specific prior learning. No background in terms of specific subjects studied for national or international qualifications is expected or required. The skills needed for the geography course are developed within the context of the course itself.



## Group 4

### Biology HL-SL

The study of biology will develop an appreciation of the interconnections of life from the molecular level to the vast scope of the biosphere. The IB biology course aims to promote a deeper understanding of critical concepts in nature, emphasising the development of inquiry and critical thinking skills through experiential learning in the classroom and laboratory. Both the HL and SL students examine a variety of topics from the molecular level to that of the biosphere, and will deepen their understanding of today's relevant scientific issues, such as GMOs (genetically modified organisms), climate change, IVF (in vitro fertilization) reproductive technology, cloning, stem cell therapy and ethical issues related to science. Students taking HL biology will learn each topic in greater depth than SL students and may consider studying science at a university level. The content and level of the HL programme is set to provide a sound preparation for college or university courses requiring a biological qualification, e.g. biochemistry, dentistry, medicine, agriculture or pharmacy.

#### Summary of the Two-Year Course Content

##### *Knowledge*

Cell biology; molecular biology; genetics; ecology; evolution and biodiversity; human and animal physiology; metabolism, cell respiration and photosynthesis; plant biology.

##### *Skills*

Design of scientific investigations; Basic laboratory methods for data collection; Analysis and evaluation of scientific data.

##### *Group project*

Students work in groups with chemistry and physics students to experimentally investigate a scientific theme of their choice, followed by an oral presentation of the results.

#### Internal Assessment During the Two-Year Course

Students produce a written laboratory report based on their own independent investigation. (20% of final IB grade)

#### External Assessment at the End of the Two-Year Course

Exam Paper 1:	Multiple choice (20 % of final IB grade)
Exam Paper 2:	Structured questions on knowledge and the analysis of data (HL 36%, SL 40 % of final IB grade)
Exam Paper 3:	Structured questions on knowledge and the analysis of data (HL 24%, SL 20 % of final IB grade)

#### Prerequisites

Students wishing to study IB biology need a good background in biology and chemistry. Students must have passed both courses in IGCSE coordinated science. The HL biology student is recommended to study mathematics at the mathematics SL level or higher.



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## Chemistry HL-SL

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Chemistry is an experimental science that combines academic study with the acquisition of practical and investigative skills. Knowledge of chemical principles underpins a comprehension of other scientific disciplines, as these are the basis for both the physical environment in which we live and all biological systems. The study of chemistry requires an experimental approach, used throughout the course to develop the understanding of chemical theories. Students taking chemistry may consider studying science at the university level. The content and level of the programme is set to provide a sound preparation for courses in higher education requiring a scientific qualification, e.g. medicine, biological science or environmental science, and serves as useful preparation for employment.

### Summary of the Two-Year Course Content

#### *Knowledge*

Stoichiometric relationships, atomic structure, periodicity, chemical bonding and structure, energetics/thermochemistry, chemical kinetics, equilibrium, acids and bases, redox processes, organic chemistry; measurement and data processing plus one option among: materials, biochemistry, energy or medicinal chemistry

#### *Skills*

Design of scientific investigations; Basic laboratory methods for data collection; Analysis and evaluation of scientific data.

#### *Group project*

Students work in groups with Physics and Biology students to experimentally investigate a scientific theme of their choice, followed by an oral presentation of the results.

### Internal Assessment During the Two-Year Course

Students produce a written laboratory report based on their own independent investigation. (20% of final IB grade)

### External Assessment at the End of the Two-Year Course

Exam Paper 1:	Multiple choice (20 % of final IB grade)
Exam Paper 2:	Structured questions on knowledge, problem solving and data (HL 36%, SL 40 % of final IB grade)
Exam Paper 3:	Structured questions on knowledge, problem solving and data (HL 24%, SL 20 % of final IB grade)

### Prerequisites

Students must have passed mathematics and chemistry in their pre-IB year. Coordinated science is a prerequisite for entrance into the IB Diploma Programme; additionally, the following criteria must be met to take chemistry. Chemistry HL students are required to achieve at least a B in IGCSE mathematics as their grade in the final IGCSE exam or at least an average high school diploma grade of 6.0 in the two IGCSE years. Chemistry SL students are required to achieve at least a C in IGCSE mathematics as their grade in the final IGCSE exam or at least an average high school diploma grade of 5.0 in the two IGCSE years. Students who fail to fulfil this condition but want to take chemistry SL will be interviewed by the relevant IB teacher and/or take a placement test to demonstrate they have the required mathematical skills.



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## Physics HL-SL

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Physics is the most fundamental of the experimental sciences, as it seeks to explain the universe itself from the very smallest particles - currently accepted as quarks, which may be truly fundamental, to the vast distances between galaxies. The DP physics course allows students to develop traditional practical skills and techniques and increases their abilities in the use of mathematics, which is the language of physics. It allows students to develop interpersonal and digital communication skills which are essential in modern scientific endeavours and are important life-enhancing, transferable skills. The IB physics course is considered a requirement for some universities for majors such as engineering or environmental sciences.

### Summary of the Two-Year Course Content

#### *Knowledge*

Measurements and uncertainties, mechanics, thermal physics, waves, electricity and magnetism, circular motion and gravitation, atomic, nuclear and particle physics, energy production; one option among: relativity, engineering physics, imaging or astrophysics.

#### *Skills*

Design of scientific investigations; Basic laboratory methods for data collection; Analysis and evaluation of scientific data.

#### *Group project*

Students work in groups with chemistry and biology students to experimentally investigate a scientific theme of their choice, followed by oral presentations of the results.

### Internal Assessment During the Two-Year Course

Students produce a written laboratory report based on their own independent investigation. (20% of final IB grade)

### External Assessment at the End of the Two-Year Course

Exam Paper 1:	Multiple choice (20 % of final IB grade)
Exam Paper 2:	Structured questions on knowledge, problem solving and data (HL 36%, SL 40 % of final IB grade)
Exam Paper 3	Structured questions on knowledge, problem solving and data (HL 24%, SL 20 % of final IB grade)

### Prerequisites

Students must have passed physics in their pre-IB year and should have strong mathematical skills. Coordinated science is a prerequisite for entrance into the IB Diploma Programme; additionally, the following criteria must be met to take physics. Physics HL students are required to achieve at least a B in IGCSE mathematics as their grade in the final IGCSE exam or at least an average high school diploma grade of 6.0 in the two IGCSE years. Physics SL students are required to achieve at least a C in IGCSE mathematics as their grade in the final IGCSE exam or at least an average high school diploma grade of 5.0 in the two IGCSE years. Students who fail to fulfil this condition but want to take physics SL will be interviewed by the relevant IB teacher and/or take a placement test to demonstrate they have the required mathematical skills.



## Group 5

### Mathematics: analysis and approaches HL-SL

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Mathematical knowledge provides an important key to understanding the world in which we live and for most of us, also extends into our chosen profession. The HL course caters to students with a good background in mathematics and who are competent in a range of analytical and technical skills. Most of these students will be expected to include mathematics as a major component of their university studies, either as a subject or within courses such as physics, engineering and technology. Others may take this subject because they have a strong interest in mathematics and enjoy meeting its challenges and engaging with its problems.

This SL course caters to students who already possess knowledge of basic mathematical concepts, and who are equipped with the skills needed to apply simple mathematical techniques correctly. The study of mathematics is the basis for further studies in both social and natural sciences. Students can expect to need a sound mathematical background as they prepare for future studies in subjects such as chemistry, economics, psychology and business administration. During this course, students not only acquire the necessary math skills but also problem-solving skills relevant to all fields.

#### Summary of the Two-Year Course Content

All topics are compulsory. Students must study all sub-topics in each of the topics in the syllabus. Students are also required to be familiar with the topics listed as prior learning.

Numbers and algebra; Functions; Geometry and trigonometry; Statistics and probability; Calculus.

#### Internal Assessment During the Two-Year Course

The project is an individual exploration. Students produce a piece of written work that involves investigating a specific area of mathematics. (20 % of the final IB grade)

#### External Assessment at the End of the Two-Year Course (5 hours)

Exam Paper 1: short- and extended-response questions. No technology allowed. (30% of final IB grade)

Exam Paper 2: short- and extended-response questions. Technology required. (30% of final IB grade)

Exam Paper 3: two compulsory extended-response problem-solving questions. Technology required. (20% of final IB grade)

#### Prerequisites

Students must take the IGCSE extended mathematics examination and score an A\* or A for the HL mathematics: analysis and approaches course and a C or better for the SL course. Further information on specific skills and knowledge required for each course is available upon request.



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## Mathematics: applications and interpretation HL-SL

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This course is for students who are interested in developing their mathematics knowledge for describing our world and solving practical problems. Part of the SL course includes a revision of mathematics topics covered in earlier years to build on the students' confidence in the subject. Students who struggle with mathematics and/or are not planning to pursue further studies of mathematics related subjects have a good opportunity to enhance their problem-solving skills and focus on applied mathematics. The HL course is an extension of the SL course but puts significantly higher demands on the students' pre-knowledge and affinity of mathematics, including a significant increase in focus on calculus, as well as complex numbers, vectors, matrices, non-linear regressions and logarithms.

The SL course caters to students with varied backgrounds and abilities. More specifically, it is designed to build confidence and encourage an appreciation of mathematics in students who do not anticipate a significant need for mathematics in their future studies. Please note that some universities may not accept *mathematics: applications and interpretation SL*. Students who take the HL course will be those who enjoy mathematics best when seen in a practical context. This subject is aimed at students who will go on to study subjects such as social sciences, natural sciences, statistics, business, some economics, psychology, and design.

### Summary of the Two-Year Course Content

All topics are compulsory. Students must study all the sub-topics in each of the topics in the syllabus. Students are also required to be familiar with the topics listed as prior learning:

Numbers and algebra; Functions; Geometry and trigonometry; Statistics & Probability; Calculus; Introduction to differential calculus.

### Internal Assessment During the Two-Year Course

The project is an individual exploration. Students produce a piece of written work that involves investigating a specific area of mathematics. (20 % of the final IB grade)

### External Assessment at the End of the Two-Year Course (graphing calculator required)

Exam Paper 1: short-response questions on the whole syllabus. (30% HL or 40% SL of final IB grade)

Exam Paper 2: extended-response questions on the whole syllabus. (30% HL or 40% SL of final IB grade)

Exam Paper 3: extended-response problem-solving questions, HL only. (20% of final IB grade)

### Prerequisites

Students are required to have passed mathematics in the previous year (Grade 10). Students who take the IGCSE extended mathematics examination and score below C and students who take the IGCSE core examination must take the SL course. Students taking this course need to already be equipped with fundamental skills and a rudimentary knowledge of basic processes. Students who wish to take this HL course must score an A\* or A in the IGCSE extended mathematics examination.



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## Group 6

### Visual Arts HL-SL

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Visual arts are an integral part of everyday life, permeating all levels of human creativity, expression, communication and understanding. We celebrate visual arts not only in the way we create images and objects, but also in the way we appreciate, enjoy, respect and respond to the practices of art-making by others. The DP visual arts course encourages students to challenge their own creative and cultural expectations and boundaries. The course is designed for students who want to go on to study visual arts in higher education as well as for those who seek lifelong enrichment through visual arts. Students who study IB visual arts and continue to study art at the university level have opportunities to pursue a career in a variety of fields including: fashion, graphics, design, animation, photography, architecture, performing arts, advertising, broadcasting, communication, journalism, marketing, filmmaking and more.

#### External Assessment at the End of the Two-Year Course

##### Part 1: Comparative study:

Students analyse and compare different artworks by different artists. This independent critical and contextual investigation explores artworks, objects and artefacts from differing cultural contexts. Students submit 10–15 screens which examine and compare at least three artworks, at least two of which should be by different artists. The work selected for comparison and analysis should come from contrasting contexts (local, national, international and/or intercultural). (20% of final IB grade)

##### Part 2: Process portfolio:

Students submit carefully selected materials which evidence their experimentation, exploration, manipulation and refinement of a variety of visual arts activities during the two-year course. Students submit carefully selected materials which demonstrate their sustained experimentation, exploration, manipulation and refinement of a variety of art-making activities. HL students are expected to submit a greater number of pieces of work than SL students. (40% of final IB grade)

#### Internal Assessment at the End of Two Year Course

##### Part 3: Exhibition:

Students will submit a selection of resolved artworks from their exhibition. The selected pieces should show evidence of their technical accomplishment during the visual arts course and an understanding of the use of materials, ideas and practices appropriate to visual communication. Students must submit a curatorial rationale, a specified number of artworks (4–7 for SL, 8–11 for HL) and an exhibition text for each selected artwork. Students may submit two photographs of their overall exhibition to provide an understanding of the context of the exhibition and the size and scope of the works. While the photographs will not be used to assess individual artworks, they may give the moderator insight into how a candidate has considered the overall experience of the viewer in their exhibition. (40% of final IB grade)

#### Prerequisites

The IB visual arts course is open for all creative and imaginative students and not just those who have achieved a high level of technical skill. Students must have passed art in Grade 10 with at least a 5 if they wish to take visual arts at HL and at least a 4 for SL. It is not a requirement that students have taken IGCSE art and design, although it is recommended.



## Core Requirements

### CAS

All IB Diploma Programme students are required to fulfil the IB CAS requirements. This involves students participating in a balanced self-developed programme of:

Creativity: arts and other experiences that involve creative thinking

Activity: physical exertion contributing to a healthy lifestyle

Service: an unpaid and voluntary exchange that is of learning benefit for the student. This enables them to learn about their relationship and responsibility to the society around them

Students are required to create their own CAS Programme which lasts for a minimum of 18 months. The purpose of the experiences is to encourage self-awareness and growth. To achieve this, and learn to analyse their improvements, students are required to submit regular evidence in the form of e.g. written reflections. Students also participate in a CAS project that is planned and initiated with their peers. Insitut Montana Zugerberg is continually developing CAS project ideas to enable the students to choose from a wide range of ideas, giving them the opportunity to choose a project that they are passionate about, e.g. animal welfare, helping children, environmental protection etc.

All activities must be approved by the CAS Coordinator prior to students beginning them and must have an adult activity supervisor who may not be a relative or a peer. Students will meet with the CAS Coordinator during weekly lessons, whereby, the learner outcomes and the CAS requirements are discussed in further detail.

The CAS Programme is an integral part of the IB Diploma Programme and will also be extremely valuable for students' futures. It provides students with the opportunity to develop holistically and to have broad experiences outside of their academic studies. Their CAS experiences will serve as excellent examples of their well-rounded capabilities and will provide them with material for university and college applications and/or interviews.

#### **Internal Assessment During the Two-Year Course**

Students are assessed based on the evidence of the work they have carried out (e.g. their reflections). Furthermore, students will be interviewed three times during the 18-month period.

Students need to plan their activities carefully, ensure that their portfolio is always up to date throughout their involvement in the experience and provide evidence of supervision.

#### **External Assessment at the End of the Two-Year Course**

Students will not be assessed externally. It is up to the CAS Coordinator to decide whether a student has fulfilled the requirements to complete the CAS Programme. Please note, failure to fulfil the CAS requirements will lead to the IB Diploma being withheld until all requirements are fulfilled.

#### **Prerequisites**

All IB Diploma Programme students are required to take part in the CAS Programme and are assessed on their individual capabilities. Any student eligible for the IB Diploma Programme is eligible for the CAS Programme. All US High School Diploma students in grades 11-12 are also encouraged to take part in the CAS Programme.



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## Theory of Knowledge

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TOK encourages students to reflect on their own learning. Drawing from their individual Diploma Programme and the world around them, this challenging and thought-provoking course gives students the opportunity to explore different knowledge issues through thoughtful inquiry and critical thought.

All IB Diploma Programme candidates must take Theory of Knowledge. Students who will excel in this course will be those who are able to think critically, have an interest in discussion, are reflective, open-minded and are academic inquirers with an interest in the way in which we learn. Ability to construct logical arguments and present them in a coherent manner orally and in writing is an advantage.

The study of TOK is relevant to all higher education courses and careers. Learning how to reflect on your learning is a life-long skill that you will use throughout your IB studies, chosen course at university and beyond.

### Programme Outline

Understanding knowledge questions

Justification of knowledge claims

Ways of knowing (four of the following: emotion, language, reason, sense perception, intuition, faith, imagination and memory)

Areas of knowledge (six of the following: mathematics, natural sciences, human sciences, history, the arts, ethics, indigenous knowledge and religious knowledge)

### Internal Assessment During the Two-Year Course

Presentation linked to a real-life issue, focused on a knowledge question (33% of final IB grade). Presentations are assessed internally. A sample of students' presentation plans is selected and moderated by the IB Coordinator.

### External Assessment at the End of the Two-Year Course

Students write an essay on one of six prescribed titles. The essay (maximum 1600 words) will be sent to the IBO to be marked by an IB examiner. (67% of final IB grade)

Students will receive a grade A-E, based on internal and external assessments. A student must earn a minimum grade of D in TOK to qualify for the IB Diploma. (see information below regarding additional diploma points)

### Extended Essay

The Extended Essay is a research paper (maximum 4,000 words) concerning in-depth study of a focused topic within a subject. The Extended Essay offers the opportunity to investigate a topic of special interest and is intended to acquaint students with and promote high-level research and writing skills, intellectual discovery and creativity expected at university. To aid the student in this task, they are required to seek the assistance of a qualified supervisor to monitor progress and provide feedback to the candidate. Students will arrange to meet with their Extended Essay supervisor throughout the research and writing process.

Emphasis is placed on:

- The process of engaging in personal research appropriate for the subject in question
- The communication of ideas and information in a logical and coherent manner
- The overall presentation of the Extended Essay in compliance with the guidelines and
- Three reflection sessions including the viva voce or thesis defence interview.

The Extended Essay is a requirement for all IB Diploma candidates and can also be taken by students following



IB courses. The research paper is assessed against common criteria, interpreted in ways appropriate to each subject. The candidate can choose to write the essay on any IB subject that they take. In special cases, a candidate can ask for special permission to examine a topic which they are not taking, but which is of special interest to them. The stipulations are that it be a subject which the IB offers and in which a qualified faculty member can advise.

In countries where it is the norm for interviews to be required prior to acceptance for employment or for a place at university, the Extended Essay has often proved to be a valuable stimulus for discussion. Their Extended Essay can often be a useful example of the student's interest in a given subject which they can talk about in their applications to higher education and in interviews at further education institutions.

### **External Assessment**

A research essay on the topic of their choice will be sent to the IBO to be marked by an IB examiner. Students will be graded based on generic assessment criteria and will receive a grade A-E. A student must earn a minimum grade of D on the Extended Essay to qualify for the IB Diploma. (see information below regarding additional diploma points)

### **Additional diploma points**

The Extended Essay grade and the TOK grade, will be combined to give additional diploma points, on top of the subject grade scores. (A, A or A, B = 3 points, B, B; A, C; A, D; B, C = 2 points, B, D; C, C = 1 point, all other combinations = 0 points).

Please note: failure (Grade E) in the Extended Essay or the TOK course will lead to failure of the IB Diploma. Attaining a grade E in either the Extended Essay or TOK is a failing condition irrespective of the overall points earned.