

# CAISL IB Handbook for Students and Parents



Carlucci American International School of Lisbon



## THE IB DIPLOMA PROGRAM

*"...emphasize learning how to learn, helping students interact effectively with the learning environments they encounter and encouraging them to value learning as an essential and integral part of their everyday lives."*

In *What is an IB Education?*

## Table of Contents

THE DIPLOMA PROGRAM - Introduction .....	3
ELIGIBILITY FOR THE PROGRAM AT CAISL.....	3
THE DIPLOMA PROGRAM REQUIREMENTS.....	4
The IB Diploma Model.....	4
Theory of Knowledge (TOK) .....	5
The Extended Essay.....	5
Creativity, Activity, Service (CAS) .....	5
ASSESSMENT IN THE IB DIPLOMA PROGRAM.....	6
ACADEMIC INTEGRITY .....	7
FEES.....	7
THE IB PROGRAM AND UNIVERSITY ADMISSION.....	8
IB Courses at Carlucci American International School of Lisbon.....	9
GROUP 1 - Language A: Language & Literature .....	9
GROUP 2 - Languages B.....	10
GROUP 2 - Languages Ab initio .....	11
GROUP 3 - HISTORY.....	12
GROUP 3 - BUSINESS MANAGEMENT .....	12
GROUP 3 – ECONOMICS.....	13
GROUP 3 - PSYCHOLOGY.....	13
GROUP 4 – PHYSICS; CHEMISTRY; BIOLOGY .....	14
GROUP 4 - COMPUTER SCIENCE .....	15
GROUP 3/4 - ENVIRONMENTAL SYSTEMS AND SOCIETIES (transdisciplinary).....	16
GROUP 5 – MATHEMATICS: Analysis and Approaches .....	17
GROUP 5 – MATHEMATICS: Applications and Interpretation.....	18
GROUP 6 - VISUAL ARTS .....	18
GROUP 6 - MUSIC.....	19
GROUP 6 – THEATER .....	19
GROUP 6 – FILM .....	20
USEFUL CONTACTS.....	21

## THE DIPLOMA PROGRAM - Introduction

The International Baccalaureate was founded in 1968. It grew out of the efforts of international schools as early as 1924 to establish a common curriculum and university entry credential. The schools were also motivated by an idealistic vision. They hoped that critical thinking and exposure to a variety of points of view would encourage intercultural understanding by young people.

They concentrated on the last two years of school before university studies in order to build a curriculum that would lead to what they called *baccalaureate*, administered in any country, recognized by universities everywhere.

### WHAT IS IT?

The International Baccalaureate (IB) Diploma Program is:

- A comprehensive and rigorous two-year curriculum, leading to external examinations.
- For students in grades 11 and 12.
- Based on the pattern of no particular country.
- Aimed at providing students with a balanced education.

### WHAT CAN THE IB DO FOR THE STUDENT?

- The IB program can help students to become well-rounded, well-educated young adults.
- The IB program prepares students for university work.
- The IB program provides continuity for students who transfer among international schools.
- The IB Diploma provides entrance to the university systems of many countries around the world.
- Students who earn an IB Diploma may earn up to one year of advanced placement credit in American universities and colleges.

## ELIGIBILITY FOR THE PROGRAM AT CAISL

One of the unfortunate myths about the IB program is that it is “elitist” and designed for only the student with straight A’s. This is untrue; however, students and parents must be aware that it is a demanding program that requires hard work, strong **organization skills** and commitment to **meet deadlines**.

The design of the IB Program enables students to focus on the subjects in which they have special interest or aptitude. Any student who wishes to challenge him/herself and **is willing to work hard**, can succeed in the IB Program and is encouraged to work for the full Diploma. CAISL has an open policy to the IB Program, but for some subjects there are pre-requisites such as: a student cannot enroll in a Language B without having at least 3 or 4 years of experience in that language, and to enroll in Mathematics AA HL a student must have had Algebra II with a final grade of A- or above. (More details in the subject’s descriptions).

## THE DIPLOMA PROGRAM REQUIREMENTS

Diploma candidates are required to select one subject from each of six subject groups:

Studies in Language and Literature

Language Acquisition

Individuals and Societies

Sciences

Mathematics

The Arts (it can be replaced by another group subject with exception of group 5)

At least three and no more than four subjects are taken at higher level (HL) and the others at standard level (SL). Thus, students are able to explore some subjects in depth and some more broadly over the two-year period. The selection of a specific subject and its level might depend on the university entry requirements.

The curriculum contains six subject groups together with a core made up of three separate parts.

All three parts of the core - **Extended Essay, Theory of Knowledge, Creativity, Activity, Service (CAS)** – are compulsory and are central to the philosophy of the Diploma program. This is illustrated by a model with the three parts of the core at its center.

### The IB Diploma Model



Source: [www.ibo.org](http://www.ibo.org)

## Theory of Knowledge (TOK)

**Theory of knowledge (TOK)** is a required interdisciplinary course intended to stimulate critical reflection upon the knowledge and experience gained inside and outside the classroom. TOK should involve at least 100 hours of teaching. At CAISL, students begin TOK in their junior year and complete it in the first semester of their senior year. TOK challenges students to:

- Question the bases of knowledge.
- Be aware of subjective and ideological biases.
- Develop a personal mode of thought based on analysis of evidence expressed in a rational argument.

The key element in the IB educational philosophy, TOK seeks to develop a coherent approach to learning which transcends and unifies the academic subjects and encourages appreciation of other cultural perspectives.

Students are assessed on the basis of **one required essay** of a maximum of 1,600 words chosen from a list of 6 prescribed titles and an **exhibition** of 3 objects that connect to 35 “IA prompts”. The exhibition is completed at the end of grade 11.

## The Extended Essay

Diploma candidates are required to undertake original research and write an **Extended Essay (EE)** of some 4000 words. The project offers the opportunity to investigate a topic of special interest and acquaints students with the kind of independent research and writing skills expected at university. Students can choose to write on a topic in one of the subjects available on the EE guide.

The Extended Essay should be focused in its approach, but apart from initial teacher supervision and guidance, it should be the student’s own personal research, albeit at an introductory level.

At CAISL, the Extended Essay is introduced in November/December of the junior year and is completed by September/October of the senior year. Each student works one-on-one with a teacher/supervisor and signs a contract in which he/she promises to adhere to an internal timetable which guides the steps in the research process: choosing a topic, defining a research question, researching, planning, drafting, revising, and editing.

## Creativity, Activity, Service (CAS)

**Creativity, Activity, Service** is known by its acronym **CAS** and is a fundamental part of the diploma curriculum. Students in the IB Diploma program must organize the 3 strands of CAS defined as follows:

*“Creativity- exploring and extending ideas leading to an original or interpretative product or performance*

*Activity- physical exertion contributing to a healthy lifestyle*

*Service- collaborative and reciprocal engagement with the community in response to an authentic need”*

(in CAS guide, p.8)

The CAS requirement takes seriously the importance of life outside the world of scholarship, providing a refreshing counterbalance to the academic self-absorption some may feel within a demanding school program. Participation in theater productions, sports and community service activities encourages young people to share their energies and special talents while developing awareness, concern, and the ability to work cooperatively with others.

CAS begins formally in September of the student junior year and continues regularly for at least 18 months.

All students are required to keep a CAS Portfolio and to have at least 3 formal interviews with their CAS Coordinator

At CAISL students take part in a variety of activities such as:

- Habitat for Humanity
- MUN/THIMUN
- Student Council
- Banco Alimentar
- Community Service Club
- Visits to Lar das Figas

## ASSESSMENT IN THE IB DIPLOMA PROGRAM

Assessment of subjects is based on a combination of internal/IB moderated assessment and external examinations in May of the senior year.

Each subject is graded on a scale of 1 (minimum) to 7 (maximum). Up to 3 additional points may be earned for performance in the Extended Essay and Theory of Knowledge.

The Extended Essay and TOK are graded in a letter grade format from E (elementary/failing) to A (excellent).

The maximum possible score which can be achieved in the IB Diploma is 45 points ( $6 \times 7 = 42 + 3 = 45$ ).

The minimum score to obtain the Diploma is 24 with no less than an average of 4 on the Higher Level Subjects

**If a student obtains an E (elementary/failing) in either the TOK OR the Extended Essay, the student fails the IB Diploma.**

Students who fail to receive the Diploma or pass a subject exam, have the right to retake any subject either in the November or May examination session. The higher score will count, and the Diploma may be awarded.

**A maximum of three examination sessions is allowed in which to satisfy the requirements for the award of the IB Diploma.**

## ACADEMIC INTEGRITY

All work done by a student must be the student's own work. If academic misconduct is suspected, the IB will be notified.

*"The IB defines academic misconduct as behaviour (whether deliberate or inadvertent) that results in, or may result in, the candidate or any other candidate gaining an unfair advantage in one or more components of assessment. Behaviour that may disadvantage another candidate is also regarded as academic misconduct."*

*(in Diploma Program Assessment procedures, page 37)*

According to the *Academic Honesty in the Diploma Program* brochure, the categories of "academic misconduct" in the IB are:

**"Plagiarism:** *is defined as the representation intentionally or unintentionally, of the ideas, words or work of another person without proper, clear and explicit acknowledgment. The use of translation materials, unless indicated and acknowledged, is also considered plagiarism.*

**Collusion:** *is defined as supporting academic misconduct by another student, for example, allowing one's work to be copied or submitted for assessment by another.*

**Duplication of work:** *is defined as the presentation of the same work for different assessment components and/or Diploma Program requirements.*

**Misconduct:** *during an IB examination includes taking unauthorized material into an examination room, disruptive behaviour and communicating with others during the examination.*

**Communication about the content of an examination** *24 hours before or after the examination with others outside their school community is also considered a breach of regulations."*

## FEES

### Paid by CAISL

Annual Fee

### Paid by the Candidate

Subject Fees

The total exam registration fees, which are determined by the IB each year, normally don't exceed 550€.

One **unique** payment is only required in October of senior year.

Students who drop the full diploma and take IB exams as course "Certificates" are expected to cover the full cost of the exams.

## THE IB PROGRAM AND UNIVERSITY ADMISSION

The IB program is recognized worldwide as a rigorous program which both academically challenges young adults and ensures that they become well-rounded individuals who achieve both in and out of the classroom.

Universities view the IB program positively and it weights in the student's favor during the admissions progress as indicating that the student is serious about his/her work and chooses to accept both the academic and personal challenges available to him/her.

### UNITED STATES

Many universities recognize the IB Diploma as a rigorous academic program and award college credit to diploma holders. Some universities award up to 30 credits (equivalent to 1st year of university). Others award credit only for subjects taken at Higher Level with grades of 5 or higher. Some even award credit for certificates in Higher Level subjects.

### UNITED KINGDOM

Universities in the UK recognize the IB Diploma in the admissions process. It is considered equivalent to A-Levels. Students applying to the UK with the IB Diploma receive conditional offers stipulating how many overall points they need to earn on their diploma as well as in specific subjects (i.e. 34 points and 5 in Higher Level Math and Physics).

### PORTUGAL

Students applying to university with the IB Diploma may substitute IB subject results for the entrance exams required, as long as the university subscribes to the regulations of Artigo 20.º A of the Decreto-Lei n.º 296-A/98.

### SPAIN

Recognizes the IB Diploma and students do not need to take the "Pruebas de Aptitud de Acceso a la Universidad" (Selectividad).

## IB Courses at Carlucci American International School of Lisbon

GROUP		SUBJECT	LEVEL
1	LANGUAGE A: LANGUAGE & LITERATURE	ENGLISH PORTUGUESE	STANDARD/ HIGHER
2	LANGUAGE B	ENGLISH PORTUGUESE FRENCH SPANISH	STANDARD/ HIGHER
	AB INITIO	FRENCH SPANISH	STANDARD (ONLY)
3	INDIVIDUALS AND SOCIETIES	HISTORY BUSINESS ECONOMICS PSYCHOLOGY	STANDARD/ HIGHER
3/4	TRANSDISCIPLINARY	ENVIRONMENTAL SYSTEMS & SOCIETIES	STANDARD/ HIGHER
4	SCIENCES	PHYSICS CHEMISTRY BIOLOGY COMPUTER SCIENCE	STANDARD/ HIGHER
5	MATHEMATICS	MATHEMATICS: ANALYSIS & APPROACHES MATHEMATICS: APPLICATIONS & INTERPRETATION	STANDARD/ HIGHER
6	THE ARTS	VISUAL ARTS MUSIC THEATER FILM	STANDARD/ HIGHER

### BRIEF SUBJECT DESCRIPTION

#### GROUP 1 - Language A: Language & Literature

##### ENGLISH; PORTUGUESE

*“In the language A: language and literature course students 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 their associated visual and audio elements work 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.”*

(in Language A: language and literature guide, p.20)

Assessment: SL

**Oral assessment:**

1 internally assessed individual oral

Assessment weight: 30%

**Final written examination in May of senior year:**

2 externally assessed exams (paper 1 and 2)

Assessment weight: 70%

Assessment: HL

**Oral assessment:**

1 internally assessed individual oral

Assessment weight: 20%

**HL Level Essay:**

1 externally assessed essay on one non-literary text or a collection of non-literary texts by one same author, or a literary text or work studied during the course. (1200-1500 words)

Assessment weight: 20%

**Final written examination in May of senior year:**

2 externally assessed exams (paper 1 and 2)

Assessment weight: 60%

NOTE: Students can also study two Languages A, omitting Group 2.

## GROUP 2 - Languages B

ENGLISH; PORTUGUESE; FRENCH; SPANISH

*“In the Language B course, 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. 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. A key aim of the language B course is to develop international-mindedness through the study of language, culture, and ideas and issues of global significance.”*

Assessment: HL and SL

**External Assessment**

Written component: two written papers are externally set in May of senior year:

Paper 1: Productive skills- Writing 25%

Paper 2: Receptive skills- separate sections: listening and reading 50%

Assessment weight: 75%

**Internal Assessment**

SL-1 individual oral assessment based on a visual stimulus

HL-1 individual oral assessment based on an extract from one literary work studied in class

Assessment weight: 25%

**Pre-Requisites:** 3/4 years of prior experience in the Language B intended.

## GROUP 2 - Languages Ab initio

FRENCH; SPANISH

*“Language ab initio is a language acquisition course designed for students with no prior experience of the target language, or for those students with very limited previous exposure. It should be noted that language ab initio is offered at SL only.*

*Because of the inherent difficulty of defining what constitutes “very limited exposure” to a language, it is not possible to list specific conditions such as the number of hours or the nature of previous language instruction; however, it is important to note that any student who is already able to understand and respond to spoken and written language on a range of common topics is not to be placed in language ab initio as this would not provide an appropriate academic challenge, nor is it fair for those students who are genuine beginners of the language.”*

(in Language ab initio guide, p.6)

Assessment: SL only

**External Assessment**

Written component: two written papers are externally set in May of senior year:

Paper 1: Productive skills- Writing 25%

Paper 2: Receptive skills- separate sections: listening and reading 50%

Assessment weight: 75%

**Internal Assessment**

1 individual oral assessment- a conversation with the teacher, based on a visual stimulus and at least one additional course theme.

Assessment weight: 25%

## GROUP 3 - HISTORY

*“The 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. The course emphasizes the importance of encouraging students to think historically and to develop historical skills as well as gaining factual knowledge. It puts a premium on developing the skills of critical thinking, and on developing an understanding of multiple interpretations of history. In this way, the course involves a challenging and demanding critical exploration of the past.”*

(in History Guide, p.5)

Assessment: HL/SL

### **External Assessment**

Written component: three written papers are externally set in May of senior year:

Paper 1: 30% (SL) / 20% (HL)

Paper 2: 45% (SL) / 25% (HL)

Paper 3: 35% (HL only)

Assessment weight: 75% (SL) – 80% (HL)

### **Internal Assessment**

Historical Investigation

Assessment weight: 25% (SL) / 20% (HL)

## GROUP 3 - BUSINESS MANAGEMENT

*“The business management course is designed to meet the current and future needs of students who want to develop their knowledge of business content, concepts and tools to assist with business decision-making. Future employees, business leaders, entrepreneurs or social entrepreneurs need to be confident, creative and compassionate as change agents for business in an increasingly interconnected global marketplace. The business management course is designed to encourage the development of these attributes. Through the exploration of four interdisciplinary concepts—creativity, change, ethics and sustainability—this course empowers students to explore these concepts from a business perspective. Business management focuses on business functions, management processes and decision-making in contemporary contexts of strategic uncertainty. Students examine how business decisions are influenced by factors that are internal and external to an organization and how these decisions impact upon a range of internal and external stakeholders. Emphasis is placed on strategic decision-making and the operational business functions of human resource management, finance and accounts, marketing, and operations management.”*

(in Business guide, page 6)

Assessment: HL/SL

### **External Assessment**

Written component: two written papers are externally set in May of the senior year:

Paper 1: 25% (HL) / 35% (SL)  
Paper 2: 30% (HL) / 35% (SL)  
Paper 3: 25% (HL only)  
Assessment weight: 80% (HL) /70% (SL)

**Internal Assessment**

Research Project (HL)/Research Project (SL)  
Assessment weight: 20% (HL) /Assessment weight: 30% (SL)

## GROUP 3 – ECONOMICS

*“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. At the heart of economic theory is the problem of scarcity. While the world’s population has unlimited needs and wants, there are limited resources to satisfy these needs and wants. As a result of this scarcity, choices have to be made. The economics course, at both SL and HL, uses economic theories to examine the ways in which these choices are made:*

- at the level of producers and consumers in individual markets (microeconomics)*
- at the level of the government and the national economy (macroeconomics)*
- at an international level where countries are becoming increasingly interdependent through international trade and the movement of labour and capital (the global economy).*

*The choices made by economic agents (consumers, producers and governments) generate positive and negative outcomes and these outcomes affect the relative well-being of individuals and societies. As a social science, economics examines these choices through the use of models and theories.”*

(in Economics guide, p.6)

Assessment: HL/SL

**External Assessment**

Written component: two (for SL)/three (for HL) written papers are externally set in May of senior year:

Paper 1: 20% (HL) / 30% (SL)  
Paper 2: 30% (HL) / 40% (SL)  
Paper 3: 30% (HL only)  
Assessment weight: 80% (HL) /70% (SL)

**Internal Assessment**

Portfolio of 3 commentaries (HL&SL)  
Assessment weight: 20% (HL) 30% (SL)

## GROUP 3 - PSYCHOLOGY

*“Psychology is the rigorous and systematic study of mental processes and behavior. It is a complex subject which draws on concepts, methods and understandings from a number of different disciplines. There is no single approach that would describe or explain mental processes and behavior on its own as human beings are complex animals, with highly developed frontal lobes, cognitive abilities, involved social structures and cultures. The study of behavior and mental processes requires a multidisciplinary approach and the use of a*

*variety of research techniques whilst recognizing that behavior is not a static phenomenon, it is adaptive, and as the world, societies and challenges facing societies change, so does behavior.*

*At the core of the DP psychology course is an introduction to three different approaches to understanding behavior:*

*biological approach to understanding behavior*

*cognitive approach to understanding behavior*

*sociocultural approach to understand behavior”*

(in Psychology guide, p.12)

Assessment: HL/SL

**External Assessment**

Written component: two (for SL)/three (for HL) written papers are externally set in May of senior year:

Paper 1: 40% (HL) / 50% (SL)

Paper 2: 20% (HL) / 25% (SL)

Paper 3: 20% (HL only)

Assessment weight: 80% (HL) /75% (SL)

**Internal Assessment**

Experimental study (HL&SL)

Assessment weight: 20% (HL) 25% (SL)

## GROUP 4 – PHYSICS; CHEMISTRY; BIOLOGY

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

*The aims enable students, through the overarching theme of the Nature of science, to:*

*-appreciate scientific study and creativity within a global context through stimulating and challenging opportunities*

*-acquire a body of knowledge, methods and techniques that characterize science and technology*

*-apply and use a body of knowledge, methods and techniques that characterize science and technology*

*-develop an ability to analyze, evaluate and synthesize scientific information*

*-develop a critical awareness of the need for, and the value of, effective collaboration and communication during scientific activities*

*-develop experimental and investigative scientific skills including the use of current technologies*

*-develop and apply 21st century communication skills in the study of science*

- become critically aware, as global citizens, of the ethical implications of using science and technology
- develop an appreciation of the possibilities and limitations of science and technology
- develop an understanding of the relationships between scientific disciplines and their influence on other areas of knowledge.”

(in Physics guide, p.17)

Assessment: HL/SL

**External Assessment**

Written component: three written papers are externally set in May of senior year:

Paper 1: 20% (HL) / 20% (SL)

Paper 2: 36% (HL) / 40% (SL)

Paper 3: 24% (HL) / 20% (SL)

Assessment weight: 80% (HL) /80% (SL)

**Internal Assessment**

“The internal assessment requirements are the same for biology, chemistry and physics. The internal assessment, worth 20% of the final assessment, consists of one scientific investigation. The individual investigation should cover a topic that is commensurate with the level of the course of study. Some of the possible tasks include:

- a hands-on laboratory investigation
- using a spreadsheet for analysis and modelling
- extracting data from a database and analyzing it graphically
- producing a hybrid of spreadsheet/database work with a traditional hands-on investigation
- using a simulation provided it is interactive and open-ended.”

(in Biology guide, p.153)

**Pre-Requisites**

Physics SL: Algebra II in the 10<sup>th</sup> grade. Physics HL: Student who wants to take Physics HL should also be enrolled in Math HL.

*(No student should study Physics without having studied Algebra II)*

Chemistry: Student should already had studied one semester of Chemistry in the 10<sup>th</sup> grade.

Biology: Student should already had studied one year of Biology in the high school.

## GROUP 4 - COMPUTER SCIENCE

“The computer science course should aim to:

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
8. raise awareness of the moral, ethical, social, economic and environmental implications of using science and technology
9. develop an appreciation of the possibilities and limitations associated with continued developments in IT systems and computer science
10. encourage an understanding of the relationships between scientific disciplines and the overarching nature of the scientific method."

(in Computer Science guide, p.8)

Assessment:

**External Assessment**

Written component: two written papers are externally set in May of senior year: Paper 1: 40% (HL) / 45% (SL)

Paper 2: 20% (HL) / 25% (SL)

Paper 3: 20% (HL only HL)

Assessment weight: 80% (HL) / 70% (SL)

**Internal Assessment**

Development of a computational solution (20% HL / 30% SL)

## GROUP 3/4 - ENVIRONMENTAL SYSTEMS AND SOCIETIES (transdisciplinary)

*"ESS is an interdisciplinary group 3 and 4 course that is offered only at standard level (SL). As an interdisciplinary course, ESS is designed to combine the methodology, techniques and knowledge associated with group 4 (sciences) with those associated with group 3 (individuals and societies). Because it is an interdisciplinary course, students can study ESS and have it count as either a group 3 or a group 4 course, or as both. If students choose the latter option, this leaves the opportunity to study an additional subject from any other group, including an additional group 3 or group 4 subject. ESS is a complex course, requiring a diverse set of skills from its students. It is firmly grounded in both a scientific exploration of environmental systems in their structure and function and in the exploration of cultural, economic, ethical, political, and social interactions of societies with the environment. As a result of studying this course, students will become equipped with the ability to recognize and evaluate the impact of our complex system of societies on the natural world. The interdisciplinary nature of the course requires a broad skill set from students and includes the ability to perform research and investigations and to participate in philosophical discussion. The course requires a*

*systems approach to environmental understanding and problem solving and promotes holistic thinking about environmental issues. It is recognized that to understand the environmental issues of the 21st century and suggest suitable management solutions, both the human and environmental aspects must be understood.”*

(in Environmental Systems and Societies guide, p.6)

Assessment: SL/ HL

**External Assessment**

Written component: 2 written papers are externally set in May of senior year:

SL- Paper 1 (case study):25% HL- 30%

SL and HL - Paper 2 (short answers and structured essays): 50%

**Internal Assessment:**

SL- Individual investigation: 25% at HL- 20%

## GROUP 5 – MATHEMATICS: Analysis and Approaches

*“This course recognizes the need for analytical expertise in a world where innovation is increasingly dependent on a deep understanding of mathematics. This course includes topics that are both traditionally part of a pre-university mathematics course (for example, functions, trigonometry, calculus) as well as topics that are amenable to investigation, conjecture and proof, for instance the study of sequences and series at both SL and HL, and proof by induction at HL. The course allows the use of technology, as fluency in relevant mathematical software and hand-held technology is important regardless of choice of course. However, Mathematics: analysis and approaches has a strong emphasis on the ability to construct, communicate and justify correct mathematical arguments. Students who choose Mathematics: analysis and approaches at SL or HL should be comfortable in the manipulation of algebraic expressions and enjoy the recognition of patterns and understand the mathematical generalization of these patterns. Students who wish to take Mathematics: analysis and approaches at higher level will have strong algebraic skills and the ability to understand simple proof. They will be students who enjoy spending time with problems and get pleasure and satisfaction from solving challenging problems.”*

(in Mathematics: analysis and approaches guide, p.8)

Syllabus content

*Students are required to study 5 topics: Number and Algebra/Functions/ Geometry and trigonometry/Statistics and Probability/ Calculus.*

Assessment:

**External Assessment (HL and SL)**

Written component: written papers are externally set in May of the senior year:

Paper 1: 40% (SL) 30% (HL)

Paper 2: 40% (SL) 30% (HL)

Paper 3: 20% (HL only)

Assessment weight: 80%

**Internal Assessment (HL and SL)**

---

Mathematical exploration (20%): This is a piece of written work that involves investigating an area of mathematics.

**Pre-Requisites:** Algebra 2

## GROUP 5 – MATHEMATICS: Applications and Interpretation

*“This course recognizes the increasing role that mathematics and technology play in a diverse range of fields in a data-rich world. As such, it emphasizes the meaning of mathematics in context by focusing on topics that are often used as applications or in mathematical modelling. To give this understanding a firm base, this course also includes topics that are traditionally part of a pre-university mathematics course such as calculus and statistics. The course makes extensive use of technology to allow students to explore and construct mathematical models. Mathematics: applications and interpretation will develop mathematical thinking, often in the context of a practical problem and using technology to justify conjectures. Students who choose Mathematics: applications and interpretation at SL or HL should enjoy seeing mathematics used in real-world contexts and to solve real-world problems. Students who wish to take Mathematics: applications and interpretation at higher level will have good algebraic skills and experience of solving real-world problems. They will be students who get pleasure and satisfaction when exploring challenging problems and who are comfortable to undertake this exploration using technology.”*

(in Mathematics: Applications and Interpretation guide, p.8)

Syllabus content

*Students are required to study 5 topics: Number and Algebra/Functions/ Geometry and trigonometry/Statistics and Probability/ Calculus.*

Assessment:

### **External Assessment (HL and SL)**

Written component: written papers are externally set in May of the senior year:

Paper 1: 40% (SL) 30% (HL)

Paper 2: 40% (SL) 30% (HL)

Paper 3: 20% (HL only)

Assessment weight: 80%

### **Internal Assessment (HL and SL)**

Mathematical exploration (20%): This is a piece of written work that involves investigating an area of mathematics.

**Pre-Requisites:** Algebra 2

## GROUP 6 - VISUAL ARTS

*“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.”*

(in Visual Arts guide, p. 6)

Group 6 subjects can be replaced by another subject from another group with the exception of group 5 subjects (Mathematics).

Assessment: HL/SL

**External Assessment**

Part 1: Comparative study - 20%

Part 2: Process Portfolio - 40%

**Internal Assessment**

Part 3: Exhibition – 40%

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

**Pre-Requisites:** At least 2 years of Visual Arts (Grades 9 and 10)

## GROUP 6 - MUSIC

*“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.”*

(in Music guide, p.7)

Assessment SL/HL

**External Assessment**

-Exploring music in Context (Portfolio submission) - 30% SL/ 20% HL

-Presenting music (collection of works submission)- 40% SL/ 30% HL

**Internal Assessment**

-Experimenting with music (Report submission) - 30% SL/ 20% HL

-Contemporary music-maker (Continuous multimedia presentation of a real-life project)- 30% HL only

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

## GROUP 6 – THEATER

*“Theatre is a dynamic, collaborative and live art form. It is a practical subject that encourages discovery through practical inquiry, experimentation, risk taking and the presentation of ideas to others. The IB Diploma Programme theatre course is a multifaceted theatre-making course. It gives students the opportunity to make theatre as creators,*

*designers, directors and performers. It emphasizes the importance of working both individually and as part of an ensemble. It offers the opportunity to engage actively in the creative process of inquiring, developing, presenting and evaluating. Students are encouraged to work as inquisitive and imaginative artists, transforming ideas into action and communicating these to an audience.*

*The basis of theatre is inquiry into the human condition; what makes us human, the actions we take and the stories we tell, how we interact and how we share our visions. Theatre is a form of expressive communication to others, and students are therefore required to think about the responsibilities of theatre-making, considering carefully what they wish to communicate and how to best present their ideas.*

*Theatre students learn to apply research and theory to inform and contextualize their work as they experience the course through practical and physical engagement. They understand that knowledge resides in the body and that research can be conducted physically through both action and practice. In this respect, the theatre course encourages students to appreciate that through the processes of researching, creating, preparing, presenting and critically reflecting on theatre—as participants and spectators—they gain a richer understanding of themselves, their community and the world. Through the study of theatre, students strengthen their awareness of their own personal and cultural perspectives, developing an appreciation of the diversity of theatre practices, their processes and their modes of presentation. This enables students to discover and engage with different forms of theatre across time, place and culture and promotes international-mindedness. Participation in the DP theatre course results in the development of both theatre and life skills; the building of confidence, imagination, creativity and a collaboration mindset.”*

(in Theatre guide, p.4)

Assessment: HL/SL

**External Assessment**

Solo theatre piece (HL only) 35%

Collaborative Project- 40% SL / 25% HL

Research presentation- 30% SL / 20% HL

**Internal Assessment**

Production Proposal- 30% SL /20% HL

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

## GROUP 6 – FILM

*“The DP film course aims to develop students as proficient interpreters and makers of film texts. Through the study and analysis of film texts, and through practical exercises in film production, the film course develops students’ critical abilities and their appreciation of artistic, cultural, historical and global perspectives in film. Students examine film concepts, theories, practices and ideas from multiple perspectives, challenging their own viewpoints and biases in order to understand and value those of others.*

*DP film students experiment with film and multimedia technology, acquiring the skills and creative competencies required to successfully communicate through the language of the medium. They develop an*

*artistic voice and learn how to express personal perspectives through film.*

*The film course emphasizes the importance of working collaboratively. It focuses on the international and intercultural dynamic that triggers and sustains contemporary film, while fostering in students an appreciation of the development of film across time, space and culture. DP film students are challenged to understand alternative views, to respect and appreciate the diverse cultures that exist within film, and to have open and critical minds.”* (in Film guide, page 8)

Assessment: HL/SL

**External Assessment**

Collaborative film project (HL only) 35%

Textual analysis- 30% SL / 20% HL

Comparative Study- 30% SL / 20% HL

**Internal Assessment**

Film Portfolio- 40% SL /25% HL

## USEFUL CONTACTS

IB site – [www.ibo.org](http://www.ibo.org)

CAISL site – [www.caislisbon.org](http://www.caislisbon.org)

HS & IB Coordinator – Ana Almeida - [hs.ib@caislisbon.org](mailto:hs.ib@caislisbon.org)