

# Brummana High School



## COURSE DESCRIPTIONS

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### IB PROGRAMME

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## Academic Year 2025-2026

# Principal' s Letter

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Dear Parents and Students,

Welcome to the International Baccalaureate Diploma Programme offered to students of both International and Lebanese programmes at BHS in Grades 11 and 12.

The International Baccalaureate Diploma Programme is a challenging, comprehensive, holistic, educational experience, designed to produce independent learners and thinkers, who have the capacity to shine in all academic disciplines, and connect their understanding of these through an interdisciplinary approach to the global issues which confront us all in the 21<sup>st</sup> century.

It is an excellent qualification recognized worldwide to prepare students for the rigorous discipline of pursuing undergraduate studies at universities in Lebanon and countries around the world, where, if students have graduated with the International Baccalaureate Diploma, they will enter sophomore year. The International Baccalaureate requires all round ability, natural intellectual curiosity, a critical approach to study, and an appetite for sustained, hard work. For students who have these qualities, it is a very rewarding educational experience in every sense.

Yours sincerely,

David Gray

(Principal)

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## **Core**

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Extended Essay

Theory of Knowledge

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# Group 1 – Studies in language and literature.

## Language A: Arabic Language and literature HL and SL

*Weekly HL meetings: 5 periods*

*Weekly SL meetings: 4 periods*

### Course Description

The language A: language and literature course introduce students to critical study and interpretation of written and spoken texts from a wide range of literary forms and non-literary text-types. The formal analysis of texts is supplemented by awareness that meaning is not fixed but can change in respect to contexts of production and consumption. The course is organized into three areas of exploration and seven central concepts, and focuses on the study of both literary or non-literary texts.

### Approaches to Teaching and Learning

#### - Approaches to learning:

Social skills –Thinking skills -Communication skills – Research skills – Self management skills

#### - Approaches to teaching:

Teaching based on Inquiry – Teaching focusing on Effective teamwork and collaboration - Teaching developed in local and global context -Teaching designed to remove barriers to learning – Teaching focused on conceptual understanding- Teaching informed by assessment (formative and summative)

### Course Content

- Four literary works
- 30 non-literary genres

### Assessment

#### Internal:

A global issue study in a 40-line literary excerpt and non-literary extract

#### External:

- **Paper 1:** Written analysis of one of two unseen texts
- **Paper 2:** In response to one of six questions, an essay based on two literary texts studied

# Group 1 – Studies in language and literature.

## Language A: English language and literature HL and SL

Weekly HL meetings: 5 periods

Weekly SL meetings: 4 periods

### Course Description

This course will present the opportunity for students to study a wide range of both literary and non-literary bodies of work. They will explore the nature of language and the ways in which it shapes and influences the world we live in. Students will be introduced to the major Areas of Exploration with which they will scrutinize and deconstruct textual masterpieces. Their collective and individual studies will equip them with conceptual frameworks used to shape their understanding of the world, across time and space.

### Approaches to Teaching and Learning

This course is constructed to provide the ideal learning environment and tools for students to develop the IB learner profile. Students are encouraged to harness their inquisitiveness as they construct conceptual understanding across local and global contexts. There will be equal opportunity for students to collaborate and work individually as they reflect on texts. Solo and group presentations, guided discussions, authentic creation, and investigative research are just a few of the many activities that this course will entail, all documented in their Learner Portfolio.

### Course Content

**Introduction to the Power of Language:** This unit will open eyes to the role language plays in shaping the world and our understanding of it. Students will be introduced to and equipped with the research, intellectual, and conceptual tools they need to investigate and reflect on texts.

**Language Beyond Text:** Students will be introduced to a variety of non-conforming texts such as Graphic Novels and Visual Media. They will examine the role of writers and readers in shaping meaning. Concepts such as Identity, Perspective, and Culture will be closely studied as the intertextuality of texts is unravelled.

**Language: The Power of Transformation:** During this unit, poetry and drama will be closely investigated and deconstructed. The power of Perspective, Transformation, and Representation will be discussed in the shaping of literary and non-literary texts. The focus of this unit will be how language can impact one's perspective and experience, empowering both writer and reader with freedom of representation.

### Assessment

This course will provide several opportunities for authentic and international assessment

#### **Internal:**

*Individual Oral* that will ask students to examine a global issue reflected through the literary and non-literary works covered in class

#### **External:**

- *Paper 1:* Guided Textual Analysis
- *Paper 2:* Comparative Essay
- *Higher Level Essay:* (only for HL Students) An argumentative essay based on the Investigation of texts through the development of the student's Learner Portfolio

## **Reflection**

This course will shape students' minds and character, preparing them to become outstanding citizens of the ever-changing world. With strong investigative and independent learning skills, they will be able to easily adapt to university programmes. Having learned the value of reflection, inquiry, and self-discipline, they will have no issues with overcoming any intellectual obstacle. The wide range of texts studied across various media will ensure that students are introduced to the world and its many cultures. Along with the communication and social skills this course provides, students will be able to formulate and converse their unique ideas, playing their part in shaping tomorrow.

# Group 2 – Language acquisition

## Language B: Arabic Language and literature HL and SL

Weekly **HL** meetings: 5 periods

Weekly **SL** meetings: 4 periods

### Course Description

The nature of the language B course is to support “International Mindedness”. Students will be exposed to a variety of texts from cultures others than their own. Students are required to analyse texts orally and in a written form and develop conceptual understandings.

### Course Content

It is based on five themes: SL\HL

- a. Identities
- b. Experiences-
- c. human ingenuity
- d. social organization
- e. sharing the planet
- f. Two literary works (HL)

### Assessment

<b>External:</b>	<b>75%</b>
<b>Paper 1</b> (1 hour 15 minutes) Productive skills—writing (30 marks) One writing task of 250–400 words from a choice of three, each from a different theme, choosing a text type from among those listed in the examination instructions.	25%
<b>Paper 2</b> (1 hour 45 minutes)Receptive skills—separate sections for listening and reading (65 marks) 50%Listening comprehension (45 minutes) (25 marks) Reading comprehension (1 hour) (40 marks) Comprehension exercises on three audio passages and three written texts, drawn from all five themes	50%
<b>Internal:</b> This component is internally assessed by the teacher and externally moderated by the IB at the end of the course. <b>Individual oral assessment</b> A conversation with the teacher, based on a visual stimulus, followed by discussion based on an additional theme.	25%



## Group 2 – Language acquisition

### Language B: French ab initio B SL

*Weekly meetings: 4 periods*

#### Course Description:

The French language ab initio course is a language acquisition course for students who do not know or speak French or for students with very limited insight. It should be noted that this course is offered at SL only.

In the French ab initio-SL course, students develop responsive, productive and interactive communication skills. They learn to communicate in French language, in known and new contexts.

#### Approaches to Teaching and Learning in French ab initio-SL

Through approaches to learning in language acquisition courses, French ab initio students develop skills that have relevance across all areas that help them “learn how to learn”. They develop the Teaching and Learning approach through a number of approaches: Inquiry, conceptual understanding, local and global contexts, effective teamwork and collaboration. Differentiated teaching to meet the needs of all learners and informed by assessment (formative and summative). The learning approach focus on: Thinking, research, communication, social and self-management skills.

#### Course Content

The French ab initio / SL course offer five prescribed themes; the themes provide relevant contexts for study at the SL of language acquisition in the DP, and opportunities for students to communicate about matters of personal, local or national, and global interest. The five prescribed themes are:

- Identities
- Experiences
- Human ingenuity
- Social organization
- Sharing the planet

#### Assessment

##### **Internal** – Weighting 25%

Teacher assess internally this component and send it to the IB to moderate externally at the end of the course.

##### **Individual oral assessment – 30 marks**

A conversation with the teacher, based on a visual stimulus and at least one additional course theme.

##### **External (2 hours 45 minutes – Weighting 75%):**

**Paper 1:** 1-hour, Productive skills— writing: 30 marks / weighting 25% two written tasks of 70–150 words each from a choice of three tasks. **Paper 2:** 1 hour 45 minutes, Receptive skills – weighting 50% Listening comprehension - 45 minutes, 25 marks / weighting 25% Reading comprehension - 1 hour, 40 marks / weighting 25%

Comprehension exercises on three audio passages and three written texts, drawn from all five themes.

**Reflection:**

Language French ab initio is more than an academic course. Learners will not only acquire a new language, they will also develop international-mindedness through the study of language and cultures. French ab initio students understand the relationship between the languages and cultures and realize the importance of language in relation to other areas of knowledge. Finally, French ab initio language acquisition fosters curiosity, creativity and a lifelong enjoyment of language learning.

## Group 2 – Language acquisition

### Language B: French B HL and SL

*Weekly HL meetings: 5 periods*

*Weekly SL meetings: 4 periods*

#### Course Description:

Language B is a language acquisition course designed to provide students with the necessary skills and intercultural understanding to enable them to communicate successfully in an environment where community speak the target language. This additional language-learning course is designed for students with some previous learning of that language.

#### Approaches to Teaching and Learning in French/Language B:

Each of the five ATL Skills categories are incorporated in the programme:

- Thinking skills, including areas such as critical thinking, creative thinking and ethical thinking
- research skills, including skills such as comparing, contrasting, validating and prioritizing information
- communication skills, including skills such as written and oral communication, effective listening, and formulating arguments
- social skills, including areas such as forming and maintaining positive relationships, listening skills, and conflict resolution
- self-management skills, including both organizational skills, such as managing time and tasks, and affective skills, such as managing state of mind and motivation

#### Course content:

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.

Language B course will provide the opportunity to engage with a broad range of texts, stimuli and scenarios that address topics of **personal, local or national and global** significance. Five prescribed themes are common to the syllabuses of language B. The five prescribed themes are **identities, experiences, human ingenuity, social organization and sharing the planet**.

In addition, the study of **two literary works** is required at HL.

## Assessment

Section	Skills	Assessment
<p><b>External assessment</b></p> <p>SL: 3 hours</p> <p>HL: 3 hours and 30 minutes</p>	<p><b>Productive skills</b> – writing (30 marks)</p> <p>One writing task of 250–400 words (SL) or 450–600 words (HL) from a choice of three, each from a different theme, choosing a text type from among those listed in the Examinations instructions.</p> <p><b>Receptive skills</b> – separate sections for listening and reading (65 marks)</p> <p>Listening comprehension (SL: 45 minutes, HL: 1 hour) (25 marks) Reading comprehension (1 hour) (40 marks)</p>	<p>Paper 1 25% SL: 1 hour 15 minutes HL: 1 hour and 30 minutes</p> <p>Paper 2 50% SL: 1 hour 45 minutes HL: 2 hours</p>

# Group 3 – Individuals and Societies

## Economics HL and SL

Weekly **HL** meetings: 5 periods

Weekly **SL** meetings: 4 periods

### Course Description

Economics is an exciting, dynamic subject that allows students to develop an understanding of the complexities and interdependence of economic activities in a rapidly changing world. The Economics course familiarizes students with economic theories at three levels being the level of producers and consumers in individual markets; the government/ national economy; and the international level. Throughout this course, students will dispose the adequate economic knowledge needed to evaluate the effects of economic choices on the well-being of individuals and societies in terms of equity, efficiency and sustainability.

### Approaches to Teaching & Learning

The economics course is focused on **inquiry-based** teaching and learning, in which students are given the opportunity to explore economic theories or global issues using real- world examples. The teaching and learning approach seeks to develop principled young economists who can use economic **concepts** and apply them into the right **content** of economics (theories, models, ideas and tools) in a given **context** through the study of real- world issues and examples. Together these components help students to acquire a holistic and integrated understanding of economics as a discipline.

### Course Content

The course is divided into the following four units

Unit 1: Introduction to Economics

Unit 2: Microeconomics

Unit 3: Macroeconomics

Unit 4: The Global Economics

### Assessment

	<b>STANDARD LEVEL(SL)</b>	<b>HIGHER LEVEL ( HL)</b>
<b>Internal Assessment</b>	Portfolio of 3 commentaries (30%)	Portfolio of 3 commentaries (20%)
<b>External Assessment</b>	<b>Paper 1</b> - Extended Response Paper (30%) <b>Paper 2</b> - Data response paper including some quantitative questions (40%)	<b>Paper 1</b> - Extended Response Paper (20%) <b>Paper 2</b> - Data response paper including some quantitative questions (30%) <b>Paper 3</b> - Policy paper including quantitative and qualitative questions (40%)

# Group 3 – Individuals and Societies

## Digital Society HL and SL

Weekly **HL** meetings: 5 periods

Weekly **SL** meetings: 4 periods

### Course Description

**Digital society** is an interdisciplinary course within the individuals and societies subject group. The course is designed for young people interested in exploring the impact and importance of digital systems and technologies in the contemporary world. Digital society is intended to appeal to a broad range of teachers in the social studies, media, humanities, IT and related subject areas.

The course integrates concepts, content and contexts through inquiry.

- **Concepts** such as expression, space and identity highlight powerful, pervasive and debatable perspectives that provide insight for inquiry.
- **Content** informs inquiry with details about digital systems including areas related to data, algorithms, media, AI, robotics and more.
- **Contexts** situate inquiry into areas significant to life in digital society including social, cultural and environmental contexts.

In addition, HL students consider important contemporary **challenges and digital interventions**.

### Course Aims

The course aims support standard level (SL) and higher level (HL) students on their **inquiry** journey as they:

- **Focus** inquiry using course concepts, content and contexts as well as real-world examples
- **Explore** diverse sources relevant to digital society
- **Investigate** impacts and implications of digital systems for people and communities
- **Reflect** on emerging trends, future developments and further insights
- **Share** discoveries about digital society with others

### Course Content

Component		
<b>Introduction</b> 1.1 What is digital society?		
<b>Concepts</b> 2.1 Change 2.2 Expression 2.3 Identity 2.4 Power 2.5 Space 2.6 Systems 2.7 Values and ethics	<b>Content</b> 3.1 Data 3.2 Algorithms 3.3 Computers 3.4 Networks and the internet 3.5 Media 3.6 Artificial intelligence 3.7 Robots and autonomous technologies	<b>Contexts</b> 4.1 Cultural 4.2 Economic 4.3 Environmental 4.4 Health 4.5 Human knowledge 4.6 Political 4.7 Social
<b>Inquiry Project (internal assessment)</b> An inquiry project into impacts and implications of digital systems for people and communities. The requirements are common to SL and HL students.	<b>HL extension: challenges and interventions</b> 5.1 Global well-being 5.2 Governance and human rights 5.3 Sustainable development	

## Assessment Model

Having followed the digital society course, students are expected to demonstrate the following assessment objectives.

### Understand, apply, analyse, evaluate and synthesize:

- course topics, enduring understandings and areas for inquiry
- real-world examples involving digital systems
- claims and perspectives of diverse sources
- impacts and implications of digital systems for people and communities
- emerging trends and future developments
- challenges and interventions in digital society (HL only).

### Develop and refine digital society skills including:

- managing inquiry projects through planning, documentation and feedback
- researching using diverse and relevant sources
- thinking in critical and creative ways
- communicating in multiple modes and media.

## Assessment at a glance

Type of assessment	Format of assessment	Time (hours)		Weighting of final grade (%)	
		SL	HL	SL	HL
<b>External</b>					
Paper 1	Four structured questions that address the common SL and HL syllabus and real-world examples in an integrated way. <i>Students answer two of four structured questions.</i>	1h30	-	40%	-
Paper 1	Six questions in two sections that address syllabus topics and real-world examples in an integrated way. -Section A: <i>Students answer two of four structured questions on the common SL and HL syllabus.</i> -Section B: <i>Students answer one of two extended response questions based on the HL extension.</i>	-	2h15	-	35%
Paper 2	Four source-based questions that address the common SL and HL syllabus in an integrated way. Sources may include text, audio, visuals, data, diagrams and/or infographics. <i>Students answer all four questions.</i>	1h15	1h15	30%	20%
Paper 3	Questions that address an intervention related to an HL extension challenge topic. A brief statement indicating the real-world nature of a selected challenge topic will be released prior to the examination. <i>Students answer all four questions.</i>	-	1h15	-	25%
<b>Internal</b>					
Inquiry project (IA)	Students conduct an inquiry into impacts and implications of digital systems for people and communities. The submission requirements for the project include: <ul style="list-style-type: none"> <li>• an inquiry process document not to exceed 1500 words</li> <li>• a recorded multimedia presentation that does not exceed 10 min</li> <li>• a list of references.</li> </ul>	-	-	30%	20%

## Group 3 – Individuals and Societies

### Psychology HL and SL

Weekly *HL* meetings: 5 periods

Weekly *SL* meetings: 4 periods

#### Description:

At the core of the DP psychology course is an introduction to three different approaches to understanding behaviour: the biological, cognitive and sociocultural approaches. Students study and critically evaluate the knowledge, concepts, theories and research that have developed the understanding in these fields. The interaction of these approaches to studying psychology forms the basis of a holistic and integrated approach to understanding mental processes and behaviour as a complex, dynamic phenomenon, allowing students to appreciate the diversity as well as the commonality between their own behaviour and that of others.

The contribution and the interaction of the three approaches is understood through the four options in the course, focusing on areas of applied psychology: abnormal psychology, developmental psychology, health psychology, and the psychology of relationships.

#### Course Content:

##### Core:

1. Biological approach to understanding behaviour
2. Cognitive approach to understanding behaviour
3. Sociocultural approach to understanding behaviour
4. Approaches to researching behaviour

##### Options:

- Abnormal Psychology
- Developmental Psychology
- Health Psychology
- Psychology of Human Relationships

#### Types of Assessment

##### External Assessment

- Paper 1: Three short answer questions on the core. One essay from a choice of three on the biological, cognitive, and sociocultural approaches.  
**HL only**: essays will reference additional HL topic.
- Paper 2: SL: one question from a choice of three on one option.  
**HL only**: two questions; one each from a choice of three on two options.
- Paper 3: **HL ONLY** Three short answer questions on approaches to research.

##### Internal Assessment

Experimental study: A report on an experimental study undertaken by the student.



## Group 3 – Individuals and Societies

### Philosophy HL and SL

Weekly **HL** meetings: 5 sessions

Weekly **SL** meetings: 4 sessions

Philosophy is a course that tackles questions important to humanity. For example, what is it to be a human being and how do I know what is the right thing to do? Students learn how to think systematically, analyse arguments, and study philosophical themes. They also study stimuli, such as films, songs and books, in order to connect and uncover the underlying philosophical concepts behind them.

The course is focused on stimulating students' intellectual curiosity and encouraging them to examine both their own perspectives and those of others. Students are challenged to develop their own philosophical voice and to grow into independent thinkers, in addition to engaging with some of the world's most interesting and influential thinkers. The course also develops highly transferable skills such as the ability to formulate arguments clearly, to make reasoned judgments and to evaluate highly complex and multifaceted issues.

The study of philosophy provides students with valuable skills that prepare them for an array of careers, including those in medicine, law, politics, international relations, business, economics, and psychology. Studying philosophy prepares students for many different kinds of careers because it focuses on the foundations of learning and fosters many different kinds of transferable skills.

- The study of philosophy enhances your ability to evaluate and resolve problems
- Through reading, writing, and dialogue, philosophy teaches students how to analyze and interpret texts, concepts, and the reasoning of others. You'll learn how to frame hypotheses and put problems into manageable form.
- Philosophy teaches students how to develop and support their own positions, interpretations, and analyses. It provides training in the construction of clear formulations, good arguments, and apt examples.
- Philosophy teaches interpretive writing through its examination of challenging texts, comparative writing through emphasis on fairness to alternative positions, argumentative writing through developing students' ability to establish their own views

The skills acquired in the study of philosophy will also serve you well if you get into public speaking, participate in a debate, or run for student government. When it's time to write essays for college entrance, your skills can make you stand out from other applicants.

SL & HL	<p><b>Core theme</b> The core theme "Being human" is compulsory for all students.</p> <p>One optional theme: 1. Aesthetics 2. Epistemology 3. Ethics 4. Philosophy of religion 5. Philosophy of science 6. Political philosophy 7. Social philosophy</p> <p>One prescribed text from options that include Plato, Nietzsche, Rene Descartes...</p> <p>Paper 1: Essay questions on the core theme and the options Paper 2: Essay question regarding the prescribed text IA: Philosophical analysis of non-philosophical stimulus (song, film, book...)</p>
HL	<p>One MORE optional theme</p> <p>The HL extension topic "Philosophy and contemporary issues" is compulsory for all HL students.</p> <p>Paper 3: This paper consists of one question based on an unseen text.</p>

# Group 4 – Sciences

## Biology HL and SL

*Weekly HL meetings: 5 periods*

*Weekly SL meetings: 4 periods*

### Course Description

Biologists investigate the living world at all levels using many different approaches and techniques. We will look at different topics of biology, switching from the micro- to the macro and back. On one end there is the cell, its molecular construction and complex metabolic reactions. At the other end of the scale biologists investigate the interactions that make whole ecosystems function.

### Approaches to Teaching and Learning

ATL are strategies, skills and attitudes that permeate the teaching and learning environment. These approaches and tools that enhance student learning and assist student preparation for life. The main 5 ATL skills are: communication, thinking, self-management, social, and research.

### Course content:

SL units

Cell Biology; Molecular Biology; Genetics; Ecology; Evolution and Biodiversity; Human Physiology, Option D

Additional HL unit

Plant Biology, in addition to other AHL topic for each of the SL units

### Assessment:

#### Internal

The internal assessment (IA), worth 20% of the final grade, consists of one scientific investigation. The individual investigation should cover a topic related to the course of study. Student work is internally assessed by the teacher and externally moderated by the IB. The performance in internal assessment at both SL and HL is marked against common assessment criteria. The IA should represent 10 hours of investigative work.

#### External

**Paper 1:** 20% of assessment (both HL and SL)- duration of exam: 45 min SL/60 minutes HL-consists of multiple-choice questions (40 for HL and 30 for SL) which are designed to be short, test knowledge of the course content.

**Paper 2:** 36% of assessment for HL 40% for SL- This paper consists of two sections. In Section A there is a data-based question which requires data analysis, and other short answer questions. In section B, students are expected to answer 2 questions from a choice of 3 (HL) or 1 question from a choice of 2 (SL). These are extended response questions which may involve writing several paragraphs and higher ordered thinking.

**Paper 3:** 24% of assessment for HL 20% for SL- This paper consists of two sections. Section A will assess students on experimental skills and techniques, analysis and evaluation, using unseen data linked to the course material. Section B consists of short-answer and extended- response questions from the option component of the syllabus (Option D). Calculator use is permitted on this paper. answer and extended- response questions from the option component of the syllabus (Option D). Calculator use is permitted on this paper.

# Group 4 – Sciences

## Chemistry HL and SL

*Weekly HL meetings: 5 periods*

*Weekly SL meetings: 4 periods*

### Course Description

Chemistry is an experimental science that combines academic study with the practical skills. Chemistry is often a prerequisite for many other courses in higher education, such as medicine, biological science and environmental science. The diploma program chemistry course allows students to develop a wide range of practical skills as well as interpersonal and information technology skills which are essential to life in the 21<sup>st</sup> century.

In this course students become more aware of how scientists work and communicate with each other. They have the opportunities to design experiments, collect data, analyse results and evaluate their results. The chemistry course encourages students to be knowledgeable, inquiring, caring, and open minded, in addition to approaches to teaching and learning where they develop skills from the five ATL categories: thinking, research, social, self-management and communication.

### Course Content

#### Core Topics

1. Stoichiometric relationships
2. Atomic structure
3. Periodicity
4. Chemical bonding and structure
5. Energetics/thermochemistry
6. Chemical kinetics
7. Equilibrium
8. Acids and bases
9. Redox processes
10. Organic chemistry
11. Measurements and data processing

# Group 4 – Sciences

## Physics HL and SL

*Weekly HL meetings: 5 periods*

*Weekly SL meetings: 4 periods*

### Course Description

Physics is the most fundamental of the experimental sciences as it seeks to explain the universe itself, from the very smallest particles – quarks, which may be truly fundamental - to the vast distances between galaxies. The IB Physics course is a rigorous course designed for students who have interest in Physics. It allows students to graduate with solid foundation in experimental skills, problem solving skills and knowledge in Physics. It is well suited to, although not limited to, students who wish to pursue careers in science or in Engineering. The IB Physics course is given at both Standard and Higher levels. These levels differ in depth, breadth as well as in the needed mathematical and critical thinking skills.

### Approaches to Teaching and Learning

Teaching in IB physics is based on inquiry, focused on conceptual understanding, developed in local and global contexts, based on effective teamwork and collaboration, differentiated to meet the needs of all learners, informed by assessment (formative and summative) and the Learning in the IB physics program is oriented to develop Thinking skills, Communication skills, Self-management skills, Social skills and Research skills.

### Course Content

#### Core Topics to be covered in HL and SL

1. Physical measurement
2. Mechanics
3. Thermal physics
4. Waves
5. Electricity and Magnetism
7. Atomic and nuclear physics
- 8: Energy production.

#### Additional Topics to be covered in HL.

9. Wave phenomena
10. Fields
11. Electromagnetic induction
12. Quantum and nuclear physics

#### **One option Topic to be covered in HL and SL.**

### Assessment

#### Internal:

Individual Investigation: **IA** (Experimental Investigation: 20%) and Group 4 project.

#### External:

**Paper 1**(Multiple choice: 20%)

**Paper 2**(Short answer and Extended response :40% for SL and 38% for HL)

**Paper 3**(Data based questions and Extended response questions on the option material:20% for SL and 28% for HL).

# Group 5 – Mathematics

## Mathematics: analysis and approaches HL and SL

Weekly **HL** meetings: 6 periods

Weekly **SL** meetings: 4 periods

### Course Description

This course has a strong emphasis on the ability to construct, communicate and justify correct mathematical arguments. It includes topics that are both traditionally part of a pre- university mathematics course as well as topics that are amenable to investigation, abstraction, conjecture and proof.

Subjects at **HL** are studied in greater depth and breadth than at **SL**. At both levels many skills are developed, especially those of critical thinking and **analysis**.

### Approaches to Teaching and Learning

- Students work on Investigations that require research, analysis, and evaluation
- Students link Mathematics to TOK as they take an unfamiliar viewpoint into account
- Students learn using animations and simulations to strengthen conceptual understanding
- Students are trained on the use of ICT tools
- Students learn through knowledge building assessments

### Course Content

**Topic 1:** Number and Algebra

**Topic 2:** Functions

**Topic 3:** Geometry and Trigonometry

**Topic 4:** Statistics and Probability

**Topic 5:** Calculus

### Assessments

#### Internal (20%)

The Mathematical exploration is a short paper written by the student based on a topic of his/her chosen, allowing students to increase their understanding of mathematical concepts and processes, and to develop a wider appreciation of Mathematics.

The exploration is marked internally by the teacher and then moderated by an IB moderator. The content of the exploration should be 12 to 20 pages long with double spacing excluding the front page, the works cited page, and appendices if applicable. The work must be individual. Group work is not allowed.

#### External (80%)

Paper 1	Paper 2	Paper 3
No calculators allowed Formula Booklet allowed - Section A: short-response Section B: extended- response	Calculators allowed Formula Booklet allowed - Section A: short-response Section B: extended- response	Calculators allowed Formula Booklets allowed - Two extended-response problem-solving questions.
SL		HL
Paper 1: 40% - 1h30m Paper 2: 40% - 1h30m		Paper 1: 30% - 2h Paper 2: 30% - 2h Paper 3: 20% - 1h

# Group 5 – Mathematics

# Mathematics Applications and Interpretations HL and SL

Weekly **HL** meetings: 6 periods

Weekly **SL** meetings: 4 periods

## Course Description

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 modeling.

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.

## Approaches to teaching and learning

Approaches to teaching and learning in the DP refer to deliberate strategies, skills and attitudes that permeate the teaching and learning environment. These approaches and tools are intrinsically linked to the IB learner profile, which encourages learning by experimentation, questioning and discovery. In the IB classroom, students should regularly learn mathematics by being active participants in learning activities.

## Course Content

**Topic 1:** Number and Algebra

**Topic 2:** Functions

**Topic 3:** Geometry and trigonometry

**Topic 4:** Statistics and Probability

**Topic 5:** Calculus

## Assessment Policy

Assessment component	Weighting
<b>Internal assessment</b> This component is internally assessed by the teacher and externally moderated by the IB at the end of the course. Mathematical exploration Internal assessment in mathematics is an individual exploration. This is a piece of written work that involves investigation an area of mathematics. (20 marks)	20 %
<b>External assessment</b> (3 hours) Paper 1 (90 minutes) Technology required. (80 marks) Compulsory short-response questions based on the syllabus. (80 marks)	80 % 40 %
<b>Paper 2 (90 minutes)</b> Technology required. (80 marks) Compulsory extended-response questions based on the syllabus. (80 marks)	40%

## Core

## Creativity, Activity, Service

CAS is mandatory core component of the IB Diploma Program.

It aims to provide students a counterbalance to the academic thoroughness of the educational program. CAS gives students the opportunity to learn through experience and how to take actions in the service of others.

CAS Promotes a balanced lifestyle, encourages students to explore their interests, build skills and serve their community by engaging in experiences that they enjoy from each of the three strands: Creativity, Activity & Service.

### The Three Strands: C, S, A

<b>Creativity</b>	Exploring and extending ideas leading to an original or interpretive product or Performance. It includes any CAS experience which involves originality and inventiveness from the behalf of students.
<b>Activity</b>	Physical exertion contributing to a healthy lifestyle. It includes any CAS experience which involves a physical effort and challenge.
<b>Service</b>	Collaborative and reciprocal engagement with the community in response to an authentic need. Service by definition should never be financially rewarded. It is a voluntary effort done for free.

### CAS Experiences

The CAS program extends over a period of 18 months with a weekly engagement of at least two or three hours a week.

CAS experiences vary between single event activities and ongoing activities distributed over the 18-month period and linked to at least one of the three strands.

#### The CAS activities should

- Be based on a personal interest, skill, talent or opportunity for growth and challenge
- Not consist of a project the students get paid for
- Develop the attributes of the IB learner profile and link to the academic subjects
- Not be a project that is required by one of the six subject areas of the DP
- May or may not involve all of the CAS stages
- Be approved by the CAS coordinator

### CAS Project

This is a mandatory project which is a collaborative series of CAS experiences that extend over at least one month (from planning to completion), and helps students develop various skills such as problem-solving, communication and decision making.

The project could cover one, two, or all three CAS strands.

The project should involve a group of students working together and could also involve collaborating with members of the community to achieve the project's goal.

## CAS Learning Outcomes

Each learning outcome should be met at least once throughout the 18-month CAS period and students should provide the evidence for it in their reflection and demonstration. LO1: Identify own strengths and develop areas for growth

LO2: Demonstrate that challenges have been undertaken, developing new skills in the process

LO3: Demonstrate how to initiate and plan a CAS experience

LO4: Show commitment to and perseverance in CAS experiences

LO5: Demonstrate the skills and recognize the benefits of working collaboratively

LO6: Demonstrate engagement with issues of global significance

LO7: Recognize and consider the ethics of choices and actions

## CAS Portfolio

The CAS portfolio is a summation of the student's CAS program and experiences.

It should provide solid evidence and highlight the student's ability and engagement in CAS. BHS uses Managebac for CAS and building the portfolio.

## CAS Stages

The CAS stages represent a framework and a structure for CAS experiences, to assist students in planning, executing, reflecting and learning from these experiences.

**Stage 1:** Investigation **Stage 2:** Preparation **Stage 3:** Action **Stage 4:** Reflection

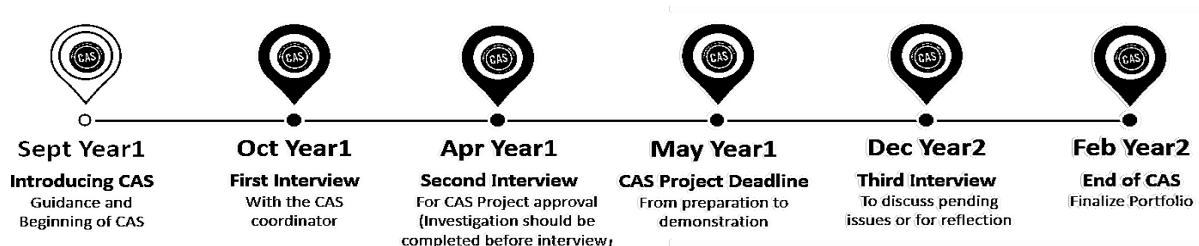
**Stage 5:** Demonstration

## CAS Completion

According to the CAS Guide, "successful completion of CAS is a requirement for the award of the IB Diploma." (CAS Guide 2017, page 8)

- A weekly commitment of ongoing CAS experiences over 18 months which balance between the three strands; The experiences should be diversified in a way to cover the three strands, equally in time and effort
  - A successful completion of the CAS project
  - Providing proof through reflections as part of the CAS portfolio
  - Meet each of the seven Learning Outcomes of CAS at least once
  - Three interviews with the CAS Coordinator during the 18-month period

## CAS Calendar



## Core



## **Extended Essay**

### **Course Description**

The extended essay is a detailed study of a specific topic related to one of the six subjects of the IB diploma. The student selects the topic from the list provided by the Diploma Programme and engages in a systematic research under the guidance of a selected supervisor.

The essay can be interdisciplinary, therefore related to two subjects. It is called the **WORLD STUDIES E.E.**

The extended essay is a formally written paper of no more than 4000 words. This word count includes the introduction, the body, and the conclusion. Throughout the process, students also write formal reflections which are submitted to IB and are graded according to one specific criterion (Criterion E: Engagement). The third reflection is written after the viva voce, an interview with the supervisor for 15-20 minutes, which is a question and answer session about the process of the writing and submitting the essay.

### **Approaches to Teaching and Learning**

The extended essay is a core requirement that depends entirely on the student's personal effort and preparation and allows the learner to become meticulous, disciplined, and analytical. The E.E. encompasses research and writing skills, reasoning, and creativity. Upon the completion of this essay, the student will have acquired professional methods of doing research, synthesizing information, and discerning between accurate and inaccurate data. The student will also become more organized, less impulsive in giving opinions, and better at communication skills.

### **E.E. PROCEDURE**

**This process consists of three parts: Doing research**

**Writing the essay**

**Viva voce**

### **ASSESSMENT**

**This essay is marked externally and is out of 34 marks.**

- |                                             |          |
|---------------------------------------------|----------|
| 1. Criterion A: Focus and method            | 6 marks  |
| 2. Criterion B: Knowledge and understanding | 6 marks  |
| 3. Criterion C: Critical thinking           | 12 marks |
| 4. Criterion D: Presentation                | 4 marks  |
| 5. Criterion E: Engagement                  | 6 marks  |

## **Core**

# Theory of Knowledge

*Weekly meetings: 2 periods*

*Twice a month: one seminar period*

## Course Description:

The TOK core course provides students with an opportunity to explore and reflect on the nature of knowledge and the process of knowing. It is a core element of the DP to which schools are required to devote at least 100 hours of class time. In TOK, students reflect on the knowledge, beliefs and opinions that they have built up from their years of academic studies and their lives outside the classroom. TOK emphasizes comparisons and connections between areas of knowledge and encourages students to become more aware of their own perspectives and the perspectives of others. The course is intended to be challenging and thought-provoking—as well as empowering—for students.

## Approaches to Teaching & Learning

The TOK course is focused on **inquiry-based** teaching and learning, in which students are given the opportunity to explore areas of knowledge and global issues using real-world examples. The teaching and learning approaches (be it on the thinking, social, communication, self-management and research levels) seek to equip students to effectively navigate and make sense of the world, and help prepare them to encounter novel and complex situations. This course engages students with multiple perspectives, foster open-mindedness and develop intercultural understanding as well as encouraging students to be more aware of their own perspectives and to reflect critically on their own beliefs and assumptions. In TOK, students will consider the importance of values, responsibilities and ethical concerns relating to the production, acquisition, application and communication of knowledge.

## Course Content

The course is divided into the following units/themes:

1. Knowers and Knowing – compulsory core theme
2. History - compulsory
3. Human Sciences - compulsory
4. Natural Sciences - compulsory
5. Mathematics- compulsory
6. Arts – compulsory

### **Choice of 2 of 5 optional themes:**

- Knowledge and Technology
- Knowledge and Language
- Knowledge and Indigenous
- Knowledge and Politics
- Knowledge and Religion

#### IV- Assessment

- Core Course to all students
- Internal Assessment:  
1/3 (33%) The TOK exhibition assesses the ability of the student to show how TOK manifests in the world around us.
- External Assessment:  
2/3 (67%) The TOK essay engages students in a more formal and sustained piece of writing in response to a title focused on the areas of knowledge.

# Extra Course

## Lebanese History and Civics for LP students only-Non IB Course

### In LP History

عدد الساعات: (حصّة واحدة في الأسبوع ) ٤٠ دقيقة ( خلال ستّة أشهر ) النّصف الأوّل من السنّة

### Course Description

يعتمد منهج مادّة التّاريخ وإنطلاقاً من محتوى مضمون المنهج اللّبنانيّ، تعريفاً لنتائج الحرب العالميّة الأولى وأثر ذلك على الأحداث في أوروبا وبعض دول العالم. كما ويشير إلى أبرز الأحداث التي وقعت ما بين الحربين من الكساد الكبير وصولاً إلى الأحزاب الشّموليّة ومن ثمّ إلى اندلاع الحرب العالميّة الثّانية. ولقد أضفنا في هذا العام، وحدة من خارج المنهج تحت عنوان: "من أتى باستقلال لبنان؟"

### Approach of teaching and learning

يُدرّك المتعلّم من خلال دراسة هذه المواضيع كيف يكون بناء المعرفة التّاريخيّة والتّفكير التّاريخيّ، وذلك عبر طرح إشكاليّات والعمل على بناء فرضيّات تعتمد على البحث والتقصّي وربط الماضي بالحاضر، معتمداً على وثائق متعدّدة ومتنوّعة. ومن خلال هذه الطرق يكسر المتعلّم التّعميمات ويبني حججه ويبيّن رأيه على أساس من النقاش الديمقراطيّ المنفتح على تقبّل الآراء ووجهات النّظر المختلفة.

### Course content

سنة أولى:

- نتائج الحرب العالميّة الأولى
- أبرز الأحداث السياسيّة والاقتصاديّة ما بين الحربين
- من أتى باستقلال لبنان؟

سنة ثانية:

- لبنان خلال الحرب العالميّة الأولى
- الإنتداب الفرنسي
- الجمهوريّة اللّبنانيّة
- لبنان خلال الحرب العالميّة الثّانية
- السلطنة العثمانيّة والعالم العربي

## In LP Civics

عدد الساعات: حصّة واحدة في الأسبوع (٤٠) دقيقة خلال أربعة أشهر (النّصف الثّاني من السّنة)

### Course description

يعتمد منهج مادّة التّربية وإنطلاقاً من محتوى مضمون المنهج اللّبنانيّ. تتوسّع الدروس في تدريب المتعلّم على كفايات تميّز الحقوق والواجبات، وتعدّ المتعلّم إعداداً مدنيّاً يمكنه من مواكبة التّطوّر العالميّ والنّسجام مع روح العصر. بالإضافة إلى تعزيز وعيه بأسباب ونتائج أبرز التّزايدات في هذا العصر. وفي هذه المرحلة يصبح المتعلّم قادراً " على استثمار الكفايات التي تعلّمها في المرحلة المتوسطة وتعزيزها وتطويرها بالكفايات الجديدة.

### Approach of teaching and learning

يُدرّك المتعلّم من خلال دراسة هذه المواضيع ماهيّة القيم الأنسانيّة، وكيفيّة ممارسة الحياة الديمقراطيّة في حياته اليوميّة إنطلاقاً من بيئته ومدرسته وصولاً لحياته في المجتمع. كما ويصبح المتعلّم على علم ودراية بالقضاء اللّبنانيّ وأنواع المحاكم، ومفهوم العدالة، والخلقية في العمل. كما ويحيط المتعلّم بعلاقة لبنان بمحيطه العربيّ.

### Course content

#### سنة أولى:

- القيم الأنسانية والديمقراطية
- العدالة والقضاء
- خلقية العمل

#### سنة ثانية:

- السلطة الرابعة
- الانتخابات
- الوظائف والنقابات
- الجيش والخدمات العامة
- الأخلاق والعدالة
- العالم العربي
- الأمم المتحدة
- التنظيم المدني

### Assessment

التّقييم يتمّ داخل المدرسة وهو على الشكل التالي: ٢٠% مشاركة و ٨٠% مشاريع صفيّة.

### Reflection

كميسرة لهذه المادّة، أجد أنّ المتعلّمين يشاركون بطريقة جيّدة من خلال طرح أفكارهم وبناء حججهم، والدمج الذي أقوم به بطريقة التّيسير والذي يجمع بين ما يتطلّبه المنهج اللّبنانيّ والمنهج العالميّ، يُظهر مدى أهميّة هذه الفسحة من المشاركة في العمليّة التّعلّميّة التي تتيح للمتعلّم بأن يكون باحث ومحقّق وليس فقط متلقّي.

# Brummana High School

## IB 1 Course Selection 2025-2026

<b>Name:</b>	<b>Grade:</b>	<b>Date:</b>
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**Instructions:**

- 1- You must choose 3 HL courses and 3 SL courses. Courses in the Core block are compulsory.
- 2- Choose 1 course from each of blocks 1,2,3,4,5 & 6 and place an X in the appropriate space.
- 3- Students coming from the LP stream must take Lang A: Arabic HL/SL or Language B Arabic HL from Block # 2 /Group 2 and the non IB official exam courses: Lebanese History and Civics.
- 4- The selected courses will be studied over 2 years.
- 5- Courses with low enrollment may be cancelled.

**Category One: Compulsory Courses and Others**

# periods	Course Name	X	# periods	Course Name	X
0.25	Creativity, Activity, Service (CAS)		1	Advisory	
2.5	Theory of Knowledge (TOK)		2	Physical Education	
0.25	Extended Essay		2	Civics /History (LP students only - Compulsory)	

**Category Two: Select one Course from each block. You must end up with 3 HL courses and 3 SL courses**

# periods	Block #1 – IB Group 1	X	# periods	Block # 4- IB Group 5	X
4	Language A: English language and literature SL		4	Mathematics Analysis and Approaches SL	
5	Language A: English language and literature HL		6	Mathematics Analysis and Approaches HL	

# periods	Block # 2- IB Group 2	X
4	Language B: Arabic language and literature SL	
5	Language B: Arabic language and literature HL <b>(LP students can take this course)</b>	
4	Language B: French language and literature SL	
5	Language B: French language and literature HL	
4	French ab initio SL	
4	<b>Language A: Arabic language and literature SL (LP students only)</b>	
5	<b>Language A: Arabic language and literature HL (LP students only)</b>	

# periods	Block # 5 - IB Group 4	X
4	Physics SL	
5	Physics HL	
4	Biology SL	
5	Biology HL	

# periods	Block #3 – IB Group 3	X
4	Economics SL	
5	Economics HL	
4	Psychology SL	
5	Psychology HL	
4	Philosophy SL	
5	Philosophy HL	

# periods	Block # 6- IB Group	X
4	Digital Society SL	
5	Digital Society HL	
4	Chemistry SL	
5	Chemistry HL	

N.B. In case you need to make any changes in your course selection before the set deadline, kindly contact IB Coordinator Mr. Georges Rizkallah at: georges.rizkallah@bhs.edu.lb

**Student's Signature:**

**Advisor's Name and Signature:**

**Parent/Guardian Signature:**