الأكاديمية الدولية - عمان

THE INTERNATIONAL ACADEMY - AMMAN

20 YEARS OF EDUCATING WITH PURPOSE

IB Diploma Handbook

2026-2028

Authorised IB World School. Accredited by the New England Association of Schools & Colleges, Council of International Schools and the Jordanian Ministry of Education. Member of the Educational Collaborative of International Schools, and the International School Services.

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INTRODUCTION

It is my pleasure to welcome you to Grade 11 and 12 at IAA. We have chosen to offer what is undoubtedly the finest passport to higher education available in the world today. The IB Diploma is a demanding course that will challenge all who take it. However, it is an accessible course to those who are realistic in their choices and who have commitment and sound study habits. Universities welcome the unique characteristics of the IB Diploma Programme students, and they recognise the way in which the programme helps prepare students for university-level education. Studies support this assertion, indicating that IB Diploma students tend to achieve above-average grades in their degrees.

Grade 11 and 12 will be two of the best years of your life. They may not feel like it at times, but in hindsight they will be! The framework of the Diploma goes a long way to making many of those lasting memories. For example, there is the intellectual stimulus of Theory of Knowledge or the depth of interest that the Extended Essay can inspire. And of course, there is the sense of teamwork and pleasure gained from Creativity-Activity-Service. All of these contribute to the amazing memory bank that is the IB Diploma experience. If you ask students who have been through the experience, they will all agree it was over too quickly. Therefore my main advice to all of you is this: Start well and grab every opportunity presented to you so that you gain the full value of the IB Diploma.

I wish you all the best and look forward to working with you and your families.

Mariam Ellala
IB DP Coordinator

THE IB MISSION STATEMENT

inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect.

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

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

THE INTERNATIONAL ACADEMY - AMMAN

VISION

To provide a unique educational experience that inspires, nourishes and celebrates the individual, one in which staff, students and parents are proud partners.

MISSION

IIAA delivers a holistic international education that exemplifies lifelong learning and responsible citizenship.

IAA belongs to the Jordanian community, fostering an atmosphere of pride and identity, celebrating our traditions and promoting a sustainable future.

IAA equips its students with the skills, principles and experiences that empower them to fulfill their academic, personal and social potential.

IAA promotes ethical development, intercultural empathy and a duty to the global and local community.

THE INTERNATIONAL BACCALAUREATE LEARNER PROFILE

"The IB Learner Profile is the IB mission statement translated into a set of learning outcomes… The aim of all IB Programmes is to develop internationally-minded people who, recognising their common humanity and shared guardianship of the planet, help to create a better and more peaceful world" (IB, 2006).

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

THE INTERNATIONAL BACCALAUREATE DIPLOMA PROFILE

The International Baccalaureate Diploma Programme (IB DP) was established in Geneva in 1968 to provide an international, and internationally recognised, university-entrance qualification for students studying outside of their home country. The IB's goal is to provide students with the values and opportunities that will enable them to develop sound judgment, make wise choices and respect others in the global community. The IB Programme equips students with the skills and attitudes necessary for success in higher education and employment; it has the strengths of a traditional liberal arts curriculum, but with three important additional features, shown at the center of the hexagonal curriculum model (below). Today the IB DP has expanded so that more than half the students opting for it come from state or national systems rather than from international schools. As the IB DP has grown, so too has its reputation for excellence; the IB DP is now recognised in almost every country in the world as one of the pre-eminent pre-university qualifications.

THE CURRICULUM MODEL

IB DIPLOMA PROGRAMME OF STUDY

The IB Diploma Programme at IAA builds on our IB Middle Years Programme (IB MYP), a broad yet demanding course of study in Grades 6 to 10 (ages 11 to 16). The IB Diploma Programme is a two-year (Grades 11 to 12, or ages 16 to 18) international curriculum that allows students to fulfill the requirements for university entrance. Internationally mobile students are able to transfer into the IB Diploma Programme from other IB World schools, as well as from other school systems.

ENTRY REQUIREMENTS

New students to IAA should have completed Grade 10 successfully, as well as passing the required school's entrance examination. It is a pre-requisite that a student has competent English skills – including speaking, listening, reading and writing. Students who complete Grade 10 at IAA must achieve at least a Grade 3 in the following subjects: Arabic, English, Maths* and Science**. If a student is unable to meet this requirement at the end of Grade 10, then they must take a re-test in August. Should they fail to improve their grade in that test, then they will not be allowed to progress to Grade 11 and must retake Grade 10.

*Pre-requisite for Math HL: students must have achieved at least a level 5 for extended Math or 6 at regular Math by the end of Grade 10.

**Pre-requisite for Physics HL: students must have achieved at least a level 5 in discrete physics or 6 at integrated sciences by the end of Grade 10.

CHOOSING YOUR COURSE OF STUDY

All Grade 11 and 12 courses at IAA are IB courses, in addition to an Islamic or Christian religion course, which is a requirement of the Jordanian Ministry of Education. Students should start the process of choosing their personal programme by consulting the list of subjects offered by IAA. This process is usually done in consultation with the DP Coordinator, the students and their parents. In Semester 2 the DP Coordinator, College Counsellor, family and student will meet to discuss course selections. Further meetings may be required as needed. As well as considering the students' academic strengths in individual subjects, when making course selections, students should also take into account their future education and career plans. Students should become familiar with the specific requirements of the universities in the countries to which they intend to apply, as different universities in different countries have different entrance requirements. subjects or combinations of subjects could be required (or excluded) by the country or university of their choice.

Information about universities around the world is available from the IAA College Counsellor. It is strongly recommended that students spend as much time as possible discussing their options with as many people as possible, including parents and teachers. Decisions made at this stage in a student's education could affect the rest of their lives, so it is vital that choices are made only after full research and consultation.

To be eligible for the IB Diploma, each student is required to take Six IB courses, with one subject taken from each group in the curriculum model:

- Group 1: Studies in Language and Literature
- Group 2: Language Acquisition
- Group 3: Individuals and Societies
- Group 4: Sciences
- Group 5: Mathematics
- Group 6: Arts OR one 'elective' subject from groups 1 to 4

Further, all IB Diploma students must choose:
- Three courses at Higher Level (HL)
- Three courses at Standard Level (SL)

In addition, all IB Diploma students must complete:
- A course in the Theory of Knowledge (TOK)
- A 4000-word Extended Essay in a subject of their choice
- A Creativity, Activity, & Service (CAS) programme

FREQUENTLY ASKED QUESTIONS

How many points do I need to pass the IB Diploma?

A candidate will be awarded an IB Diploma provided they do not meet any of the following failing conditions:

1. CAS requirements have not been met.
2. Candidate's total points are fewer than 24.
3. An N has been given for theory of knowledge, extended essay or for a contributing subject.
4. A grade E has been awarded for one or both of theory of knowledge and the extended essay.
5. There is a grade 1 awarded in a subject/level.
6. Grade 2 has been awarded three or more times (HL or SL).
7. Grade 3 or below has been awarded four or more times (HL or SL).
8. Candidate has gained fewer than 12 points on HL subjects (for candidates who register for four HL subjects, the three highest grades count).
9. Candidate has gained fewer than 9 points on SL subjects (candidates who register for two SL subjects must gain at least 5 points at SL).

What is the difference between the IB Diploma and being a Diploma Course student?

Diploma Students
The Diploma is the flagship IB Programme, providing entrance to the most prestigious universities worldwide. Students who wish to gain access to the most competitive courses, such as Medicine and Engineering, at universities that are over-subscribed (Harvard and Oxford, for instance) must take the Diploma. However, the Diploma is arguably the most rigorous post-sixteen academic programme in the world and should not on any account be undertaken lightly or by academically unsuitable candidates. Certain levels of achievement are required and certain combinations of subjects must be studied. In addition, the Theory of Knowledge (TOK) course, the Community, Action and Service (CAS) component and the Extended Essay have to be completed. Given these additional requirements, the IB is an excellent preparation for study at university. Effective time-management is an essential skill that students will need to be able to deploy when studying for the Diploma, whatever their academic prowess.

Diploma Course Students
Not all students take the full Diploma, but take a number of Diploma courses. Each year, after consultation with the IB Coordinator, Careers Counsellor and family, many students may choose to take a number of Diploma courses. Students who do not take the full Diploma are not required to take all of the Core requirements, such as TOK and the Extended Essay. However, students can still register with the IB for CAS and, as IAA places much importance on this aspect of schooling, it is a requirement that all students still complete CAS. Students who take a number of Diploma courses will do this for two major reasons:

1. Some universities and colleges do not require the full Diploma for entrance into their degree courses. However, these institutions will not be Ivy League or their equivalent.

2. Students who may struggle with the breadth and/or depth of the full Diploma can take a more personalised selection of Diploma courses instead, and they can use this as a springboard from which to access universities worldwide. Occasionally, students who do not do the full Diploma may be required to take a Foundation, or "bridging" course, at university in order for them to attain the appropriate standard for entrance to that particular institution.

How will I be graded through the course?

Students will be graded in order to assess their achievements. Assessment is based on content, knowledge, skills and tasks until the respective report date. Other factors are also taken into account, such as approach to subject and ability to learn from feedback. The grade is an indication of how well the student may do if he/she continues to work at the same level; it is not a predicted grade. Grades are given using the following achievement scale for each of the six subjects taken from Groups 1 to 6:

- Grade 7 – Excellent
- Grade 6 - Very good
- Grade 5 - Good
- Grade 4 – Satisfactory
- Grade 3 – Mediocre
- Grade 2 – Poor
- Grade 1 – Very poor

The requirements of each subject differ in terms of what constitutes work deserving of a certain grade. Students will be given IB subject-specific Grade Descriptors and Grade Boundaries in their first week of Grade 11. This is a very important document that should be referred to regularly.

Theory of Knowledge will be graded using the following indicators:

- A to E (as per the final marks awarded in the subject, with A being excellent and E being a failing condition for the whole Diploma)

CAS and Religion will be graded using the following indicators:

- E – Excellent
- S – Satisfactory
- NI – Needs Improvement

In Grade 11, each student will receive two progress and two full reports. In Grade 12, each student will receive a progress report and two full reports. These reports will also indicate how a student is progressing in meeting the required skills for his/her subject. These are very important indicators, as they are drawn from what the IB will expect from students who achieve at the highest level (i.e., gain a 7 in a subject).

Will I gain Tawjihi Equivalency?

YYes. All students who study in Grade 12 are enrolled in a selection of courses that will enable them to apply for Tawjihi equivalency, either in the Literary or Science stream. However, the particular passing requirements stipulated by the Ministry of Education in Jordan have to be met for the equivalency to be granted.

When will my Predicted Grades be ready?

Predicted Grades are collected at numerous points throughout the two-year course. For students entertaining Medicine, Oxbridge and early decision, they are collected in October of Grade 12. They will then be discussed again and may be altered in November of Grade 12 when the predicted grades for all students are derived from the November grading point. Please remember, the Diploma is a cumulative course, and the Predicted Grades are not based on the last test you take before the grading point in November of Grade 12.

Rather, they are based on your work from day one with the professional discretion of the teacher looking at your overall trend over time. Predicted Grades can go up or down. Predicted Grades are not shared with parents or students.

Why do I have to sign a Code of Conduct?

All students who start either as Diploma or Course students are required to sign a Code of Conduct. Both IAA and the IB have the highest of expectations from students in terms of their punctuality, general conduct, their ability to meet deadlines, the completion of all aspects of the curriculum in Grades 11 and 12 and their adherence to strict academic honesty.

Deadlines are a very important aspect of the life of Diploma and Course students. The school will employ a series of deadlines that will prevent pressure points from accumulating, and students are expected to abide by them. Should students miss deadlines, then they are at risk of submitting work that is not as good as it could have been due to raised levels of stress given the amount of work required. Students could risk failing their subjects (and therefore the Diploma) if IB prescribed deadlines are missed.

Academic integrity involves the avoidance of plagiarism and collusion. Students will be introduced to these concepts and, in the case of plagiarism, given training by the Library staff in order that they follow the procedures as laid out in the Academic Integrity Policy, which will also be made available to all Grade 11 students in their first week at school.

Who do I speak to about careers and university guidance?

The College Counsellor is available to all students and is the first point of call for students and parents. Students will have dedicated time built into their timetable for work with the Counsellor. This time will be used to ensure students have an appropriate action plan and are aware of the deadline and requirements of universities to which they wish to apply. IAA has many resources to help students make these difficult decisions.

However, there is no quick answer and it is not the job of any member of staff at IAA to tell any student where to go for study and what, in fact, to study. These decisions should come from the individual student in consultation with their parents and the Counsellor. A lot of time is required to decide upon which course, which country and which type of university might suit the individual. The responsibility lies with the student to do the research required so that they might make the most informed decisions. Likewise, it is the ultimate responsibility of the student to ensure that they meet the deadlines set by universities for having completed applications submitted to them.

Can a student change subjects or levels from HL to SL or vice versa?

Yes. Changes are allowed up until a designated time, and they will be at the ultimate discretion of the IB DP Coordinator. As students move through the course, changing subjects becomes increasingly disruptive, not only to the student making the change but also to their peers and the teachers concerned. Changes between Levels (HL and SL), however, are more common and can be accommodated further into the duration of the Diploma.

Any changes students wish to make must be accompanied by a Course Change Request Form which is available from the IB DP Coordinator. This will require parental and teacher signatures, as well as that of the College Counselor. Before the change is accepted or declined, there may be further consultations.

THE CORE IB CURRICULUM

Theory of Knowledge (TOK)

Theory of Knowledge is a course centred on the questions "What is knowledge?" and "How do we know?" Students are taught to critically assess the knowledge through the knowledge frameworks of scope, perspective, method and tools and ethics. By the end of the course, students should be more aware of how information is packaged and to be discerning knowers who analyse and evaluate knowledge claims. The central features of the theory of knowledge course are the exploration of themes that lend themselves to a plethora of knowledge questions and the multifaceted approach to answering them.

TOK Course Content

Students complete 100 hours over the two-year course. The course is comprised of 8 units centered on the following Core and Optional themes as well as Areas of Knowledge. These units are:

- Knowledge and the Knower
- Knowledge and Indigenous Societies
- Knowledge and Technology
- History
- Art
- Mathematics
- Natural Sciences
- Human Sciences

Assessment

At the end of the first year and the second year (Grade 12) of the course, students are officially assessed for their IB Diploma, based solely on two pieces of work:

1) The TOK Essay on a prescribed title (up to1600 words). This is supervised by a teacher in the school and then graded externally by an IB examiner.

2) The TOK Exhibition of three (3) objects with a personal connection and a real world context that is used to discuss one of the Internal Assessment (IA) prompts published in the Subject Guide. The exhibition is accompanied by a written commentary not to exceed 950 words. The commentaries are moderated externally by an IB examiner.

The final TOK grade and the final Extended Essay grade are entered into the Diploma Points Matrix (see below) to award a possible maximum of 3 extra points to be added to a student's Diploma score. Candidates not submitting satisfactory work in either area will fail the Diploma.

The Diploma Points Matrix: Theory of Knowledge

ToK/EE	A	B	C	D	E
A	3	3	2	2	Failing condition
B	3	2	2	1	
C	2	2	1	0	
D	2	1	0	0	
E	Failing condition				

The Extended Essay

The Extended Essay is an in-depth study of a limited topic within a subject. Its purpose is to provide a student with an opportunity to engage in independent research at an introductory level. Emphasis is placed on the process of engaging in personal research, on the communication of ideas and information in a logical and coherent manner and on the overall presentation of the Extended Essay in compliance with IB guidelines. Students are required to devote 40+ hours to the essay over the course of twelve months.

Subject Choice

In choosing a subject, an essential consideration should be the personal interest of the student. The subject should offer the opportunity for in-depth research, but it should also be limited in scope. It should present the candidate with the opportunity to collect or generate information and/or data for analysis and evaluation. Extended Essays submitted in Language Acquisition (English or Arabic) or Literature A (English or Arabic) must be written in the language the student studies. All other essays must be in English.

Organization of the Extended Essay

The Extended Essay is limited to 4,000 words and should include an abstract, an introduction, development methods/results, a conclusion, a bibliography and any necessary appendices. Students also are required to submit a Reflections on Planning and Progress Form (RPPF).

The Extended Essay is externally examined. Marks are awarded against a set of published criteria. The final Extended Essay grade and the final TOK grade are entered into the Diploma Points Matrix (see above), to award a possible maximum of 3 extra points to be added to a student's Diploma score. Candidates not submitting satisfactory work in either area will fail the Diploma.

There are failing conditions for the two above components. If a student scores an 'E' in either the Extended Essay or Theory of Knowledge they will not be awarded an IB Diploma.

The CAS Programme

As a result of their CAS experience as a whole, including their reflections, there should be evidence that students have:

• increased their awareness of their own strengths and areas for growth. They are able to see themselves as individuals with various skills and abilities, some more developed than others, and they understand that they can make choices about how they wish to move forward.
• undertaken new challenges. A new challenge may be an unfamiliar activity, or an extension to an existing one.
• planned and initiated activities. Planning and initiation will often be in collaboration with others. It can be shown in activities that are part of larger projects, such as ongoing school activities in the local community, as well as in small student-led activities.
• worked collaboratively with others. Collaboration can be shown in many different activities, such as team sports, playing music in a band, or helping in a kindergarten. At least one project, involving collaboration and the integration of at least two of creativity, action and service, is required.
• shown perseverance and commitment in their activities. At a minimum, this implies attending regularly and accepting a share of the responsibility of dealing with problems that arise in the course of activities.
• engaged with issues of global importance. Students may be involved in international projects, but there are many global issues that can be acted upon locally or nationally. These may include environmental concerns, caring for the elderly, etc.
• considered the ethical implications of their actions. Ethical decisions arise in almost any CAS activity (for example, on the sports field, in musical composition, or in relationships with others involved in service activities). Evidence of thinking about ethical issues can be shown in various ways, including journal entries and conversations with CAS advisers.
• developed new skills. As with new challenges, new skills may be shown in activities that the student has not previously undertaken or in increased expertise in an established area. This focus on learning outcomes emphasises that it is the quality of a CAS activity (its contribution to the student's development) that is of most importance.

SUBJECTS

GROUP 1: STUDIES IN ENGLISH LANGUAGE AND LITERATURE – HIGHER AND STANDARD LEVEL

Introduction

In this course, students study a wide range of literary and non-literary texts in a variety of media. By examining communicative acts across literary form and textual type alongside appropriate secondary readings, students will investigate the nature of language itself and the ways in which it shapes and is influenced by identity and culture. Approaches to study in the course are meant to be wide ranging and can include literary theory, sociolinguistics, media studies and critical discourse analysis among others.

Course Details

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.

Course Assessment – Standard Level (SL)

External assessment (3 hours); 70%
Paper 1: Guided textual analysis (1 hour 15 minutes); 35%
The paper consists of two non-literary passages, from two different text types, each accompanied by a question. Students choose one passage and write an analysis of it. (20 marks)
Paper 2: Comparative essay (1 hour 45 minutes); 35%
The paper consists of four general questions. In response to one question students write a comparative essay based on two literary works studied in the course. (30 marks)

Internal assessment; 30%
This component consists of an individual oral which is internally assessed by the teacher and externally moderated by the IB at the end of the course.

Individual oral (15 minutes)
Supported by an extract from one non-literary body of work and one from a literary work, students will offer a prepared response of 10 minutes, followed by 5 minutes of questions by the teacher, to the following prompt:

Examine the ways in which the global issue of your choice is presented through the content and form of one of the works and one of the body of work that you have studied. (40 marks)

Course Assessment – Higher Level (HL)

External assessment (4 hours); 80%

Paper 1: Guided textual analysis (2 hours 15 minutes); 35%
The paper consists of two non-literary passages, from two different text types, each accompanied by a question. Students write an analysis of each of the passages. (40 marks)
Paper 2: Comparative essay (1 hour 45 minutes); 25%
The paper consists of four general questions. In response to one question students write a comparative essay based on two literary works studied in the course. (30 marks)

HL essay; 20%
Students submit an essay on one non-literary body of work, or a literary work studied during the course (20 marks). The essay must be 1,200-1,500 words in length.

Internal assessment: Individual oral (15 minutes); 20%
This component consists of an individual oral which is internally assessed by the teacher and externally moderated by the IB at the end of the course.

Individual oral (15 minutes)
Supported by an extract from both one non-literary body of work and one from a literary work, students will offer a prepared response of 10 minutes, followed by 5 minutes of questions by the teacher, to the following prompt:
Examine the ways in which the global issue of your choice is presented through the content and form of one of the works and one of the bodies of work that you have studied. (40 marks)

LANGUAGE A: LITERATURE – STANDARD LEVEL
ARABIC

Introduction

The Studies in Literature course, offered at both Higher and Standard Levels, is designed to meet the needs of students for whom the language is their best language. The study of literature is the main focus of this course, which includes a world literature component.
IB Literature provides the opportunity for students to examine, discuss and compare the ideas and language of a wide variety of writers from a variety of times and cultures across the globe.
As well as presenting ideas in writing, students taking the course will be expected to contribute and listen sympathetically to ideas in stimulating class sessions where discussions, debate and presentation play an essential role.
During the course, students should develop their ideas, knowledge and enjoyment of literary themes, concepts and language. They should also develop the ability to examine and express ideas with confidence in a variety of contexts. Students' achievements will be assessed through a combination of written and oral coursework as well as by written examination.

Course Details

Language A: Literature is a flexible course that allows teachers to choose works from prescribed lists of authors and to construct a course that suits the particular needs and interests of their students. It is divided into three parts, each with a particular focus.
- Part 1: Works in translation
- Part 2: Works originally written in the language studied
- Part 3: Free choice works

Course Assessment

External (Total 70%)
- Paper 1: Guided literary analysis; 1 hour 15 minutes (35% of the May exams) The paper consists of two passages from two different literary forms, each accompanied by a question. Students choose one passage and write an analysis of it. (20 marks)
- Paper 2: Comparative essay; 1 hour 45 minutes (35% of the May exams) - The paper consists of four general questions. In response to one question, students write a comparative essay based on two works studied in the course. (30 marks)

Internal Assessment
This component is internally assessed by the teacher and externally moderated by the IB at the end of the course (30%).
Individual oral commentary (15 minutes)
Individual oral (15 minutes)
Supported by an extract from one work written originally in the language studied and one from a work studied in translation, students will offer a prepared response of 10 minutes, followed by 5 minutes of questions by the teacher, to the following prompt:
Examine the ways in which the global issue of your choice is presented through the content and form of two of the works that you have studied. (40 marks)

What makes a good student of Group Language A?

Students who opt for any of these courses should ideally have a sound background in Literature. They must love reading and have an interest in other cultures, religions and philosophies. They should also be open-minded and inquisitive in their approach to new concepts or those which challenge their own. They must also show determination and a commitment to success

How can studying Language A help me develop?

It encourages open-mindedness and an enquiring approach to beliefs, religions and philosophies. The course aims to develop a lifelong interest and respect of literary heritage of his/her mother tongue whilst complementing it with a rich international perspective. Authors are chosen from a wide range of eras and backgrounds, and all question the problems of the individual society. There is a strong oral component to the course, encouraging students to become confident speakers as well as critical thinkers. These are qualities essential in all walks of life.

What career options does Language A give you?

Language A prepares students for all career options because of the nature and discipline of the course. Language A is an excellent foundation course for students as it covers topics usually not introduced until the first year in university. It provides a strong background for students who wish to study English, Media, Film, Theatre Studies, Art, Philosophy, Psychology, History and Law, Politics and other foreign languages.

GROUP 2: LANGUAGE ACQUISITION (LANGUAGE B)

ARABIC, ENGLISH AND SPANISH

Introduction

Language Acquisition (Language B) courses are designed to provide students with the necessary skills and intercultural understanding to enable them to communicate successfully in an environment where the studied language is spoken. This process encourages the learner to go beyond the confines of the classroom, expanding an awareness of the world and fostering respect for cultural diversity.
Diploma Programme Coordinators and teachers ensure that students are following the language course that is best suited to their present and future needs and that will provide them with an appropriate academic challenge. The most important factors in identifying the appropriate course are 1) the degree to which students are already competent in the language and 2) the degree of proficiency they wish to attain by the end of the period of study. Coordinators, in conjunction with teachers, are responsible for the placement of students. The most important consideration is that the course should be a challenging educational experience for the student.

Course Details

The course objectives are:
• Develop students' intercultural understanding;
• Enable students to understand and use the language they have studied in a range of contexts and for a variety of purposes;
• Encourage, through the study of texts and through social interaction, an awareness and appreciation of the different perspectives of people from other cultures;
• Develop students' awareness of the role of language in relation to other areas of knowledge;
• Develop students' awareness of the relationship between the languages and cultures with which they are familiar;
• Provide students with a basis for further study, work and leisure through the use of an additional language; and
• Provide the opportunity for enjoyment, creativity and intellectual stimulation through knowledge of an additional language.

Arabic, English And Spanish

Course Assessments – Standard Level (SL)
External (75%)
• Paper 1 (1 hour 15 minutes): Productive skills - 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. (30 marks; 25%)
• Paper 2 (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.

Internal (25%)

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

• Individual oral assessment: A conversation with the teacher, based on a visual stimulus, followed by discussion based on an additional theme. (30 marks)

Course Assessments – Higher Level (HL)
External (75%)
• Paper 1 (1 hour 30 minutes): Productive skills – One writing task of 450–600 words from a choice of three, each from a different theme, choosing a text type from among those listed in the examination instructions. (30 marks; 25%)
• Paper 2 (2 hours): Receptive skills—separate sections for listening and reading (65 marks; 50%)
Listening comprehension (1 hour) (25 marks)
Reading comprehension (1 hour) (40 marks)
Comprehension exercises on three audio passages and three written texts, drawn from all five themes.

Internal (25%)
This component is internally assessed by the teacher and externally moderated by the IB at the end of the course.

• Individual oral assessment - A conversation with the teacher, based on an extract from one of the literary works studied in class, followed by discussion based on one or more of the themes from the syllabus. (30 marks)

Language Acquisition (Language B)

What makes a good student of Language Acquisition (Language B)?

For this course, students need an enquiring and analytical mind. Attention to detail is paramount. They must be interested in the world around them and in other cultures, religions, philosophies and current affairs.

How can studying Language B help me develop?

It also helps students to understand how language is used. Language is a code, and if they have the key to that code they have understanding and, in turn, can be understood.
Language B is about learning to express one's self in both speech and writing and being able to handle the language system accurately. It is about the power of language and the ability to select the appropriate language for particular cultural and social situations. It is about organizing ideas so that they are communicated efficiently and appropriately. Language B is about empowerment.

What career options does Language B give you?

Language prepares students for all career options because of the nature and discipline of the course. Skills that are taught in the course, such as writing summaries, speeches, press releases, journal articles and oral presentations, are all valuable no matter what career path is taken.

BUSINESS MANAGEMENT – HIGHER AND STANDARD LEVELS

Introduction

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.

The business management course encourages the application of local, national and global examples to content and concepts; the internal assessment (IA) for both SL and HL is an individual business research project that allows greater analysis and evaluation of content, concepts and context. Students can develop a deeper understanding of an organization by studying its processes through the lenses of creativity, change, ethics and sustainability.

Course Outline

The course outline is organised around the following concepts:
- Unit 1: Introduction to business management
- Unit 2: Human resource management
- Unit 3: Finance and accounts
- Unit 4: Marketing
- Unit 5: Operations management

Course Assessment

Standard Level:
External

• Paper 1- (1 hour and 30 minutes) (35%) — Based on a pre-released statement that specifies the context and background for the unseen case study

Section A
Syllabus content: Units 1–5 excluding HL extension topics
Students answer all structured questions in this section based on the case study (20 marks)
Section B
Syllabus content: Units 1–5 excluding HL extension topics
Students answer one out of two extended response questions based on the case study (10 marks)

• Paper 2 (35%) — Answer any three from five structured questions.
Based on unseen stimulus material with a quantitative focus
Assessment objectives: AO1, AO2, AO3, AO4 (40 marks)
Section A
Syllabus content: Units 1–5 excluding HL extension topics
Students answer all structured questions in this section based on the unseen stimulus material (20 marks)
Section B
Syllabus content: Units 1–5 excluding HL extension topics
Students answer one out of two questions comprised of some structured questions and an extended response question based on the unseen stimulus material (20 marks)

Internal assessment (30%)
This component is internally assessed by the teacher and externally moderated by the IB at the end of the course.
Business research project
Students produce a research project about a real business issue or problem facing a particular organization using a conceptual lens. Maximum 1,800 words. (25 marks)

Higher Level:
External
• Paper 1 (25%) — Based on a pre-released statement that specifies the context and background for the unseen case study

Assessment objectives: AO1, AO2, AO3, AO4 (30 marks)
Section A
Syllabus content: Units 1–5 excluding HL extension topics
Students answer all structured questions in this section based on the case study (20 marks)
Section B
Syllabus content: Units 1–5 excluding HL extension topics
Students answer one out of two extended response questions based on the case study (10 marks)

• Paper 2 (30%) — Based on the unseen stimulus material with a quantitative focus
Assessment objectives: AO1, AO2, AO3, AO4 (50 marks)
Section A
Syllabus content: Units 1–5 including HL extension topics
Students answer all structured questions in this section based on the unseen stimulus material (30 marks)
Section B
Syllabus content: Units 1–5 including HL extension topics
Students answer one out of two questions comprised of some structured questions and an extended response question based on the unseen stimulus material (20 marks)

• Paper 3 (25%) - Based on unseen stimulus material about a social enterprise
Syllabus content: Unit 1–5 including HL extension topics
Assessment objectives: AO1, AO2, AO3, AO4 (25 marks)
Students answer one compulsory question based on the unseen stimulus material (25 marks)

• Internal Assessment (20%) — This component is internally assessed by the teacher and externally moderated by the IB at the end of the course.

Business research project
Students produce a research project about a real business issue or problem facing a particular organization using a conceptual lens. Maximum 1,800 words. (25 marks)

What makes a good student of Business Management?

Someone who is interested in the world of commerce and business. In the exams students must be happy and confident to put themselves in the place of management, implement decision making tools and apply them to unseen case studies and come up with realistic solutions to business problems. This requires that you confidently put forward your own personal ideas and conclusions – there are no right/wrong answers. This course also requires in students the ability to write very clearly and to use a whole new business vocabulary and style of thinking. Therefore, those articulate students, who are well read on business developments in the real world and who can appreciate how business operates both inside and outside of Jordan are likely to have the fundamentals to excel.

How can studying Business Management help me develop?

Obviously, candidates with a strong interest in business, industry, entrepreneurship and government should contemplate taking this course. Business itself has many sub-sections such as: Strategic Management, Accountancy, Human Resource Management, Marketing and Sales, Communication Strategies, Product Development (there are some very strong cross overs to IB Design in the Business Course). These are all touched upon in the course and can give some grounding for further studies at university.

ECONOMICS

Introduction

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.

Course Details

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. The Diploma Programme (DP) economics course allows students to explore these models and theories, and apply them, using empirical data.

Course Assessment

Standard level
External assessment (3 hours)
• Paper 1 (30%) - An extended response paper (25 marks)- Syllabus content (excluding HL extension material)
Students answer one question from a choice of three. (25 marks)

• Paper 2: (40%) - A data response paper (40 marks). Syllabus content: (excluding HL extension material)- Includes some quantitative questions
Students answer one question from a choice of two. (40 marks)

Internal assessment: (30%) - Portfolio of three commentaries based on different units of the syllabus (excluding the introductory unit) and on published extracts from the news media. Each of the three commentaries should use a different key concept as a lens through which to analyse the published extracts.
Maximum 800 words for each commentary (45 marks)

Higher level
External assessments (4 hours and 45 minutes)
• Paper 1: (20%) - An extended response paper (25 marks) - Syllabus content including HL extension material.
Students answer one question from a choice of three. (25 marks)

• Paper 2: (30%) - A data response paper (40 marks). Syllabus content excluding HL extension material. Includes some quantitative questions.
Students answer one question from a choice of two. (40 marks)

• Paper 3: (30%) – A policy paper (60 marks)
Syllabus content including HL extension material. Includes both quantitative and qualitative questions.
Students answer two compulsory questions. (30 marks per question)

Internal assessment: (20%) – This component is internally assessed by the teacher and externally moderated by the IB at the end of the course.
Students produce a portfolio of three commentaries, based on different units of the syllabus (excluding the introductory unit) and on published extracts from the news media. Each of the three commentaries should use a different key concept as a lens through which to analyse the published extracts.
Maximum 800 words for each commentary (45 marks)

What makes a good student in economics?

An individual who is curious about globalization, world events and the dynamics of an economy would be an ideal candidate for IB economics. Inquisitive students enjoy the course immensely as they research and examine real-life contemporary events. Well-read individuals who aspire to be catalysts of change on a global level through decisions-making make excellent economics students.

How can studying economics help me develop?

Students in economics are exposed to wide-ranging inclusive views of major world events and the ramifications thereof. This develops their critical thinking skills and widens their horizon as they must consider a multitude of variables, their correlations and consequences. They are challenged to make substantiated value-judgments for governments, businesses and individuals and provide empirical evidence to substantiate said views. Those interested in working with international organizations, governments or multinational corporations benefit greatly from a background in economics. The course is an excellent background for those aiming to pursue economics at university.

GLOBAL POLITICS – HIGHER AND STANDARD LEVELS

The 21st century is characterized by rapid change and increasing interconnectedness, impacting individuals and societies in unprecedented ways and creating complex global political challenges. Global Politics is an exciting and dynamic subject that enables students to critically engage with different political issues and aims to develop students' understanding of their role as global citizens.
Global Politics explores fundamental political concepts such as power, equality, sustainability and peace in a range of contexts. It allows students to develop an understanding of the local, national, international and global dimensions of political activity and processes.

The aims of the Global Politics course at SL and HL are to:

- Understand key political concepts and contemporary political issues in a range of contexts
- Develop an understanding of the local national, international and global dimensions of political activity
- Understand, appreciate and critically engage with a variety of perspectives and approach in global politics
- Appreciate the complex and interconnected nature of many political issues, and develop the capacity to interpret competing and contestable claims regarding those issues

Syllabus Outline

All SL and HL students are required to complete the following core units:
1- Power, sovereignty and international relations
2- Human rights
3- Development
4- Peace and conflict

All SL and HL are required to complete an engagement activity on a political issue of personal interest, complemented with research.

HL students are required to complete two case studies on any of the following topics:
HL students are required to complete two case studies on any of the following topics:
- Environment
- Poverty
- Health
- Identity
- Borders
- Security

Course Assessment

During the course all students will complete an engagement activity. The engagement activity provides students an opportunity to explore the central unifying theme of the course- people, power and politics, in practice and outside the classroom. Students may choose to enroll in MUN, volunteer with a NGO or interview political figures as part of their engagement with a political issue. Students are expected to write a 2,000 word report based on their experience and additional research.

Standard Level:
- Paper 1 (30%)- Students answer four short and structured questions on a topic from one of the four core units
- Paper 2 (45%) - Students write two essays from a choice of eight.
- Internal Assessment: Engagement Activity (25%)

Higher Level:
- Paper 1 (20%)-Students answer four short and structured questions on a topic from one of the four core units
- Paper 2 (40%)-Students must write three essays from a choice of eight

- Internal Assessment: Engagement Activity (20%)

- Internal Assessment: Two video recorded oral presentations of two case studies from two different HL extension topics (20%)

What makes a good student of Global Politics?

Students should have a passion for world issues, good debating skills and strong analytical skills. Students should be independent thinkers and researchers. Furthermore, students should be keen on exploring political issues outside of the classroom.

What career options does Global Politics give me?

Students may choose to pursue politics, international relations, law or public administration. Other careers include civil service, Foreign Service or journalism.

PSYCHOLOGY – HIGHER AND STANDARD LEVELS

Introduction

Psychology is the systematic study of behaviour and mental processes. Psychology has its roots in both the natural and social sciences, leading to a variety of research designs and applications and providing a unique approach to understanding modern society.

IB Psychology examines the interaction of biological, cognitive and socio-cultural influences on human behaviour, thereby adopting an integrative approach. Understanding how psychological knowledge is generated, developed and applied enables students to achieve a greater understanding of themselves and to appreciate the diversity of human behaviour. The ethical concerns raised by the methodology and application of psychological research are key considerations in IB Psychology.

Distinction between SL and HL

Both SL and HL students are assessed on the syllabus core (levels of analysis) in Paper 1. In addition:
• In HL Paper 2, one two or all of the essays will reference the additional HL topic.
• HL students are assessed on their knowledge and comprehension of qualitative research methodology in Paper 3.

Psychology Aims

The aims of the Psychology course at SL and at HL are to:
- Develop an awareness of how psychological research can be applied for the benefit of human beings;
- Ensure that ethical practices are upheld in psychological inquiry;
- Develop an understanding of the biological, cognitive and socio-cultural influences on human behaviour;
- Develop an understanding of alternative explanations of behaviour; and
- Understand and use diverse methods of psychological inquiry.

Course Assessment

Standard Level:
External assessment (3 hours) 75%
Paper 1 (2 hours) (50%)
Section A: Three short-answer questions on the core approaches to psychology
Section B: One essay from a choice of three on the biological, cognitive and sociocultural approaches to behaviour.
Paper 2 (1 hour) (25%)
One question from a choice of three on one option.

Internal assessment (25%)
A report of a simple experimental study conducted by the student

Higher Level:
External assessment (4 hours) 80%
Paper 1 (2 hours) (40%)
Section A: Three short-answer questions on the core approaches to psychology
Section B: One essay from a choice of three on the biological, cognitive and sociocultural approaches to behaviour. One, two or all of the essays will reference the additional HL topic
Paper 2 (2 hours) (20%)
Two questions; one from a choice of three on each of two options
Paper 3 (1 hour) (20%)
Three short-answer questions from a list of six static questions on approaches to research

Internal assessment (20%)
A report of a simple experimental study conducted by the student

What makes a good student of Psychology?

Students who feel that they have an interest in the human nature and factors that shape it.

How can studying Psychology help me develop?

IB Psychology takes a holistic approach that fosters intercultural understanding and respect. In the core of the IB Psychology course, the biological level of analysis demonstrates what all humans share, whereas the cognitive and socio-cultural levels of analysis reveal the immense diversity of influences that produce human behaviour and mental processes. Cultural diversity is explored and students are encouraged to develop empathy for the feelings, needs and lives of others within and outside their own culture. This empathy contributes to an international understanding.

What career options does Psychology give me?

There are many. One obvious field is studying Psychology at university level. Psychology is also a good basis for any major the student might choose from the human sciences discipline.

BIOLOGY – HIGHER AND STANDARD LEVELS

Introduction

The word "biology" was introduced by German naturalist Gottfried Reinhold in 1802. Since then, our understanding of living organisms has expanded considerably with the advent of techniques and technologies such as imaging and molecular sequencing methods. Of all the sciences, biology is a study that takes more of a pragmatic view than a theoretical approach. The earliest evidence of life on Earth dates from at least 3.5 billion years ago. Through reproduction and natural selection, life has diversified tremendously, occupying a wide variety of niches. This diversity makes biology both a deeply fascinating and significantly challenging study. The study of life makes progress through not only advances in techniques, but also pattern recognition, controlled experiments and collaboration between scientists. Unifying themes provide frameworks for interpretation and help us make sense of the living world: Form and function, Unity and diversity, Continuity and change, and Interaction and interdependence are four of the themes around which this biology syllabus is constructed, although other frameworks are possible. The scale of life in biology ranges from the molecules and cells of organisms to ecosystems and the biosphere. This way of considering complex systems as simpler components—an approach known as reductionism—makes systems more manageable to study. It is the foundation of controlled experiments and has thus enabled major discoveries, but it provides an incomplete view of life. At each level of biological organization, different properties exist. Living systems are based on interactions, interdependence and integration of components between all levels of biological organization.

Course Details

Higher Level and Standard Level Biology students will be expected to demonstrate:
- An understanding of scientific facts, concepts and methods;
- The ability to apply and use their understanding;
- The ability to construct and evaluate hypotheses and scientific explanations;
- The personal skills of co-operation, perseverance and responsibility; and
- The manipulative skills to carry out scientific investigations.

Content

The aim of the syllabus is to integrate concepts, topic content and the nature of science through inquiry. Students and teachers are encouraged to personalize their approach to the syllabus to best fit their interests. The new syllabus has been divided into four themes (Unity and Diversity, Form and Function, Interactions and Interdependencies, Continuity and Change). These themes have been further sub-divided into four levels of organisation (Molecules, Cells, Organisms, Ecosystems).

	Level of organization			
Theme	**1. Molecules**	**2. Cells**	**3. Organisms**	**4. Ecosystems**
A Unity and diversity	Common ancestry has given living organisms many shared features while evolution has resulted in the rich biodiversity of life on Earth.			
	A1.1 Water **A1.2** Nucleic acids	**A2.1** Origins of cells *[HL only]* **A2.2** Cell structure **A2.3** Viruses *[HL only]*	**A3.1** Diversity of organisms **A3.2** Classification and cladistics *[HL only]*	**A4.1** Evolution and speciation **A4.2** Conservation of biodiversity
B Form and function	Adaptations are forms that correspond to function. These adaptations persist from generation to generation because they increase the chances of survival.			
	B1.1 Carbohydrates and lipids **B1.2** Proteins	**B2.1** Membranes and membrane transport **B2.2** Organelles and compartmentalization **B2.3** Cell specialization	**B3.1** Gas exchange **B3.2** Transport **B3.3** Muscle and motility *[HL only]*	**B4.1** Adaptation to environment **B4.2** Ecological niches
C Interaction and interdependence	Systems are based on interactions, interdependence and integration of components. Systems result in emergence of new properties at each level of biological organization.			
	C1.1 Enzymes and metabolism **C1.2** Cell respiration **C1.3** Photosynthesis	**C2.1** Chemical signalling *[HL only]* **C2.2** Neural signalling	**C3.1** Integration of body systems **C3.2** Defence against disease	**C4.1** Populations and communities **C4.2** Transfers of energy and matter
D Continuity and change	Living things have mechanisms for maintaining equilibrium and for bringing about transformation. Environmental change is a driver of evolution by natural selection.			
	D1.1 DNA replication **D1.2** Protein synthesis **D1.3** Mutation and gene editing	**D2.1** Cell and nuclear division **D2.2** Gene expression *[HL only]* **D2.3** Water potential	**D3.1** Reproduction **D3.2** Inheritance **D3.3** Homeostasis	**D4.1** Natural selection **D4.2** Stability and change **D4.3** Climate change

Course Assessment
Standard Level

Assessment component	Weighting
External assessment (3 hours)	**80%**
Paper 1 (1 hour and 30 minutes) Paper 1A—Multiple-choice questions Paper 1B—Data-based questions (Total 45 marks)	**36%**
Paper 2 (1 hour and 30 minutes) Short-answer and extended-response questions on standard level material only. (Total 50 marks)	**44%**
Internal assessment (10 hours)	**20%**
The internal assessment consists of one task: the scientific investigation. This component is internally assessed by the teacher and externally moderated by the IB at the end of the course. (Total 24 marks)	

Higher Level

Assessment component	Weighting
External assessment (4 hours 30 minutes)	**80%**
Paper 1 (2 hours) Paper 1A—Multiple-choice questions Paper 1B—Data-based questions (Total 60 marks)	**36%**
Paper 2 (2 hour and 30 minutes) Short-answer and extended-response questions on standard level and additional higher level material. (Total 90 marks)	**44%**
Internal assessment (10 hours)	**20%**
The internal assessment consists of one task: the scientific investigation. This component is internally assessed by the teacher and externally moderated by the IB at the end of the course. (Total 24 marks)	

What makes a good student of Biology?

Qualities particularly important to the field of biological study include curiosity and an enquiring mind. Students need to be diligent and persistent when faced with large volumes of difficult and complicated work to be mastered. Above all, they should possess a respect for living things and an open mind to deal with concepts and theories that may often challenge belief structures.

How can studying Biology help me develop?

Over and above the gaining of knowledge about the living world and an appreciation of its diversity and complexity, Biology provides us with the core scientific rigors of investigation, analysis and conclusion built on a strong foundation of empirical evidence.

What career options does Biology give me?

Medicine and the various health sciences, Environmental Studies including: Agriculture and Landscaping, Botany, Animal Psychology, Biotechnology, Biochemistry, Microbiology, Veterinary Research, Drug Testing, Food and Nutrition, Brewing, Criminology, Immunology, Molecular Genetics and Genetic Counselling.

CHEMISTRY – HIGHER AND STANDARD LEVELS

Introduction

Chemistry is an experimental science that combines academic study with the acquisition of practical and investigational skills. It is often called the central science, as chemical principles underpin both the physical environment in which we live and all biological systems. Apart from being a subject worthy of study in its own right, chemistry is a prerequisite for many other courses in higher education, such as medicine, biological science and environmental science, and serves as useful preparation for employment.

Course Details

Higher Level and Standard Level Chemistry students will be expected to demonstrate the following objectives:
- An understanding of scientific facts, concepts and methods;
- The ability to apply and use their understanding;
- The ability to construct and evaluate hypotheses and scientific explanations;
- The personal skills of cooperation, perseverance and responsibility; and
- The manipulative skills to carry out scientific investigations.

Content

Skills in the study of chemistry			
Structure structure refers to the nature of matter from simple to more complex forms		**Reactivity** reactivity refers to how and why chemical reactions occur	
structure determines reactivity which in turn transforms structure			
S1. Models of the particulate nature of matter	S1.1 Particulate nature of matter	**R1. What drives chemical reactions?**	R1.1 Measuring enthalpy changes
	S1.2 The nuclear atom		R1.2 Energy cycles in reactions
	S1.3 Electron configurations		
	S1.4 Counting particles by mass		R1.3 Energy from fuels
	S1.5 Ideal gases		R1.4 Entropy and spontaneity (HL)
S2. Models of bonding and structure	S2.1 The ionic model	**R2. How much, how fast and how far?**	R2.1 How much? : the amount of chemical change
	S2.2 The covalent model		R2.2 How fast? : the rate of chemical change
	S2.3 The metallic model		R2.3 How far? : the extent of chemical change
	S2.4 From models to materials		
S3. Classification of matter	S3.1 The periodic table	**R3. What are the mechanisms of chemical change?**	R3.1 Proton transfer reactions
	S3.2 Functional groups		R3.2 Electron transfer reactions
			R3.3 Electron sharing reactions
			R3.4 Electron pair sharing reactions

Course Assessment

Standard Level

Assessment component	Weighting
External assessment (3 hours)	**80%**
Paper 1 (1 hour and 30 minutes) Paper 1A—Multiple-choice questions Paper 1B—Data-based questions (Total 45 marks)	**36%**
Paper 2 (1 hour and 30 minutes) Short-answer and extended-response questions on standard level material only. (Total 50 marks)	**44%**
Internal assessment (10 hours)	**20%**
The internal assessment consists of one task: the scientific investigation. This component is internally assessed by the teacher and externally moderated by the IB at the end of the course. (Total 24 marks)	

Higher Level

Assessment component	Weighting
External assessment (4 hours 30 minutes)	**80%**
Paper 1 (2 hours) Paper 1A—Multiple-choice questions Paper 1B—Data-based questions (Total 60 marks)	**36%**
Paper 2 (2 hour and 30 minutes) Short-answer and extended-response questions on standard level and additional higher level material. (Total 90 marks)	**44%**
Internal assessment (10 hours)	**20%**
The internal assessment consists of one task: the scientific investigation. This component is internally assessed by the teacher and externally moderated by the IB at the end of the course. (Total 24 marks)	

What makes a good student of Chemistry?

Students taking Chemistry need to be comfortable dealing with logic, abstract concepts and mathematics. They must have an open mind and one that is curious about the world around them, as there is very little in our world and beyond that is not chemical in nature.

How can studying Chemistry help me develop?

Chemistry teaches you how to experiment and investigate. Results and analyses are based on empirical evidence and therefore give concrete and valid conclusions about what is actually happening.

What career options does Chemistry give me?

There are the obvious careers of Medicine and Chemical engineering. However, you should be aware that Chemistry is involved in industry throughout the world, be it in research and development or quality-control in areas such as fuels, explosives, fertilizers, plastics, pharmaceuticals and paints. The opportunities to work with Chemistry are virtually limitless.

DESIGN TECHNOLOGY – HIGHER AND STANDARD LEVELS

Introduction

Designing with Technology involves the use of creative ingenuity in order to meet the needs and solve the problems faced by humanity. Design consists of gathering and analysing information about the problem or opportunity and then planning for some kind of intervention, either by modifying what is already there or by introducing something new. The designer is interested not just in the materials, but in a wide range of considerations that affect people's priorities. Product design is the meeting point of Science, Art, Maths, Geography, History, Law and Economics, combining elements from all these disciplines.

The manufacture of products, either as a single item or by mass production, is the cornerstone of the development of civilisations. The application and development of technology and modern production methods are what drive the evolution of products such as the computer and mobile phone. This evolution culminates to a point wherein these products can change people's lives on a global level. Those involved with these endeavours develop proficiency in analytical thinking, project management and business enterprise.

Course Details

It is the intention of the Design Technology course that students achieve the following objectives:
- Demonstrate an understanding of relevant facts, concepts, methods and techniques;
- Apply, use and present their understanding and ideas;
- Construct, analyse and evaluate design briefs, data, information, specifications and plans;
- Demonstrate the personal skills of cooperation, perseverance, and responsibility; and
- Demonstrate the manipulative skills, processes and techniques necessary to ensure safety.

Content

	A. Design in theory	**B. Design in practice**	**C. Design in context**
1. People	A1.1 Ergonomics	B1.1 User-centred design	C1.1 Responsibility of the designer C1.2 Inclusive design C1.3 Beyond usability (HL only)
2. Process	A2.1 User-centred research methods A2.2 Prototyping techniques	B2.1 The design process B2.2 Modelling and prototyping	C2.1 Design for sustainability C2.2 Design for a circular economy
3. Product	A3.1 Material classification and properties A3.2 Introduction to structural systems (HL only) A3.3 Introduction to mechanical systems (HL only) A3.4 Introduction to electronic systems (HL only)	B3.1 Material selection B3.2 Structural systems application and selection (HL only) B3.3 Mechanical systems application and selection (HL only) B3.4 Electronic systems application and selection (HL only)	C3.1 Product analysis and evaluation C3.2 Life-cycle analysis (HL only)
4. Production	A4.1 Manufacturing techniques (HL only)	B4.1 Production systems (HL only)	C4.1 Design for manufacture strategies (HL only)

Course Assessment

Standard Level
- Paper 1 (30%) — 30 multiple-choice questions on the core
- Paper 2 (30%) — One data-based question and one extended response
- Internal assessment Design project – (40%)

Higher Level
- Paper 1 (20%) — 40 multiple-choice questions
- Paper 2 (20%) — Two sections containing data-based, short answer and extended response questions
- Paper 3 (20%) — Compulsory short answer and extended response tasks
- Internal Assessment Design Project – (40%)

What makes a good student of Design Technology?

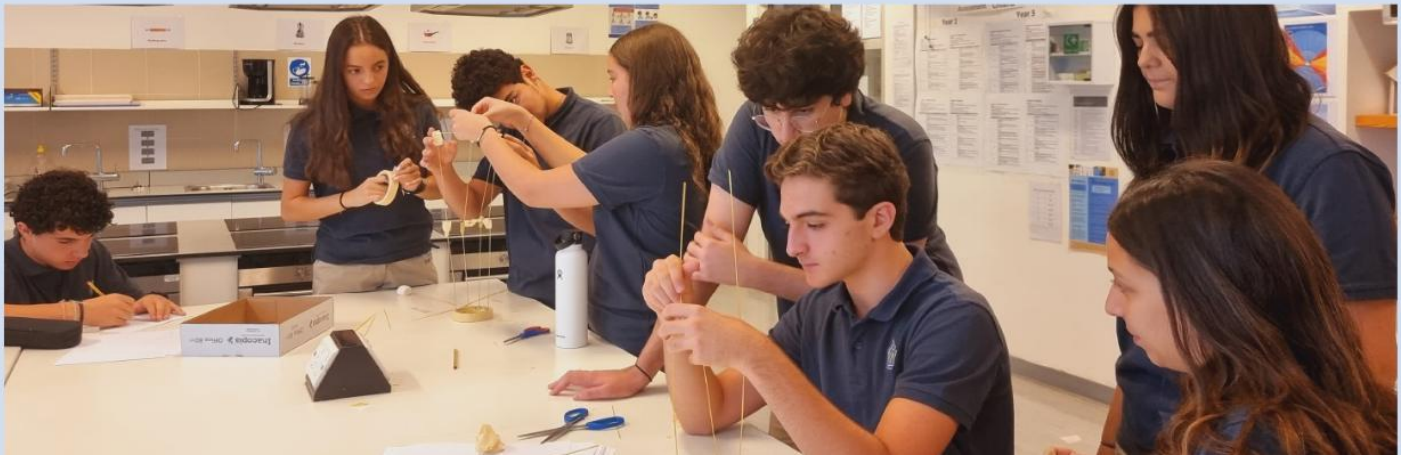
Technology students are thinkers, risk-takers, imaginative and communicators. Ideally it should be a student who likes to sketch or draw, enjoys working with his/her hands (either through fashion, engineering, modelling or art), has good ICT Skills, and likes to view the world from a perspective of "HOW or WHY does this work, and could I make it better?"
Technology students use research skills, Mathematics, Biology, Chemistry, Physics, Art, ICT, History, Geography and Languages in almost all projects.

How can studying Design Technology help me develop?

Design Technology is a totally holistic subject that supports and gives added value to all other subject areas. Through the use of the Design Cycle, students are taught to research, execute Project Management, design and improve new or existing products, and solve problems through manufacturing and evaluation. Technology utilises skills taught in other curricula subject areas and helps to associate student ideas and learning within the curriculum.

What career options does Design Technology give me?

Those who study Design Technology have many career paths open to them. These include Architecture, Engineering (Civil, Electrical and Electronic and Mechanical), Manufacturing, Model-Making, Textiles, Industrial Design, Product Design, Fashion Design, Catering and Food Technology, Science-based careers and the Creative Arts.



PHYSICS – HIGHER AND STANDARD LEVELS

Introduction

Physics is the most fundamental of the experimental sciences as it seeks to explain the universe through the study of the behaviour of matter. Physics courses for the IB involve three themes: the laws of physics, experimental skills, and the idea that physics is an evolving body of knowledge about nature. A Diploma Physics student will need to have an enquiring mind which is capable of analysing situations both conceptually and quantitatively. Ability in mathematics is a definite advantage and is essential at higher level.

Course Details

Higher Level (HL) and Standard Level (SL) students will be expected to demonstrate the following objectives:
- An understanding of scientific facts, concepts and methods;
- The ability to apply and use their understanding;
- The ability to construct and evaluate hypotheses and scientific explanations;
- The personal skills of cooperation, perseverance and responsibility; and
- The manipulative skills to carry out scientific investigations.

Content

Syllabus component	Teaching hours	
	SL	HL
Syllabus content	**110**	**180**
A. Space, time and motion	27	42
B. The particulate nature of matter	24	32
C. Wave behaviour	17	29
D. Fields	19	38
E. Nuclear and quantum physics	23	39
Experimental programme	**40**	**60**
Practical work	20	40
Collaborative sciences project	10	10
Scientific investigation	10	10
Total teaching hours	**150**	**240**

Physics syllabus content overview

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

• Topics with content that should be taught to all students

•• Topics with content that should be taught to all students plus additional HL content

••• Topics with content that should only be taught to HL students

Course Assessment

Standard Level

Assessment component	Weighting
External assessment (3 hours)	**80%**
Paper 1 (1 hour and 30 minutes) Paper 1A—Multiple-choice questions Paper 1B—Data-based questions (Total 45 marks)	**36%**
Paper 2 (1 hour and 30 minutes) Short-answer and extended-response questions on standard level material only. (Total 50 marks)	**44%**
Internal assessment (10 hours)	**20%**
The internal assessment consists of one task: the scientific investigation. This component is internally assessed by the teacher and externally moderated by the IB at the end of the course. (Total 24 marks)	

Higher Level

Assessment component	Weighting
External assessment (4 hours 30 minutes)	**80%**
Paper 1 (2 hours) Paper 1A—Multiple-choice questions Paper 1B—Data-based questions (Total 60 marks)	**36%**
Paper 2 (2 hour and 30 minutes) Short-answer and extended-response questions on standard level and additional higher level material. (Total 90 marks)	**44%**
Internal assessment (10 hours)	**20%**
The internal assessment consists of one task: the scientific investigation. This component is internally assessed by the teacher and externally moderated by the IB at the end of the course. (Total 24 marks)	

What makes a good student of Physics?

Good Physics students possess a natural flair for using systematic and analytical techniques when problem-solving, an ability to think logically in all situations and a capacity to absorb very abstract theories. However natural intelligence is not enough, and the candidate must be a very hard worker.

How can studying Physics help me develop?

The general characteristics listed above and highly valued in all spheres of society are not just used by research academics, but are invaluable skills to financiers, industrialists and politicians.

What career options does Physics give me?

Physics is an important qualification for many careers. Students who go on to study Physics at university could pursue a career in research and development, either in academia or in industry. Perhaps the majority of those who study Physics do so in order to apply their knowledge in another subject area at university. Examples of this are the many branches of Engineering, Electronics and Meteorology. Physics is also taken by students who feel that it will be useful even if not essential for their career. Those who intend to pursue a career in a completely unrelated area, such as Law or Accountancy, sometimes take the subject simply because they enjoy it or because they know that it is highly regarded by universities as a test of problem-solving ability and logical thought

ENVIRONMENTAL SYSTEMS AND SOCIETIES – HIGHER AND STANDARD LEVEL

Introduction

As a trans-disciplinary subject, Environmental Systems and Societies (ESS) is designed to combine the techniques and knowledge associated with Group 4 (Experimental Sciences) with those associated with Group 3 (Individuals and Societies). By choosing to study a trans-disciplinary course such as this as part of their diploma, students are able to satisfy the requirements for both Groups 3 and 4 of the hexagon, thus allowing them to choose another subject from any hexagon group (including another Group 3 or 4 subject). Trans-disciplinary subjects therefore introduce more flexibility into the IB Diploma Programme. The Environmental Systems and Societies course (ESS) is offered at SL only.

The central concepts of the ESS course include sustainability, equilibrium, strategy, biodiversity and EVSs. Many of the issues encountered in the course and beyond, such as resource management, pollution, globalization and energy security, are linked to these concepts

Course Details

The aims of the ESS course are to enable students to:
1. acquire the knowledge and understandings of environmental systems at a variety of scales
2. apply the knowledge, methodologies and skills to analyse environmental systems and issues at a variety of scales
3. appreciate the dynamic interconnectedness between environmental systems and societies
4. value the combination of personal, local and global perspectives in making informed decisions and taking responsible actions on environmental issues
5. be critically aware that resources are finite, and that these could be inequitably distributed and exploited, and that management of these inequities is the key to sustainability
6. develop awareness of the diversity of environmental value systems
7. develop critical awareness that environmental problems are caused and solved by decisions made by individuals and societies that are based on different areas of knowledge
8. engage with the controversies that surround a variety of environmental issues
9. create innovative solutions to environmental issues by engaging actively in local and global contexts.

Syllabus component	Teaching hours	
	SL	HL
Topic 1: Foundation	**16**	
1.1 Perspectives	(3)	
1.2 Systems	(5)	
1.3 Sustainability	(8)	
Topic 2: Ecology	22	35
Topic 3: Biodiversity and conservation	13	26
Topic 4: Water	12	25
Topic 5: Land	8	15
Topic 6: Atmosphere and climate change	10	23
Topic 7: Natural resources	10	18
Topic 8: Human populations and urban systems	9	15
Higher level (HL) lenses		**17**
HL.a Environmental law		(5)
HL.b Environmental economics		(7)
HL.c Environmental ethics		(5)
Experimental programme	**50**	**50**
Practical work	(30)	(30)
Collaborative sciences project	(10)	(10)
Individual investigation	(10)	(10)
Total teaching hours	**150**	**240**

Course Assessment

Standard Level

Assessment component	Weighting
External assessment (3 hours)	75%
Paper 1 (1 hour) Students will be provided with a range of data in a variety of forms relating to a specific, previously unseen case study. Questions will be based on the analysis and evaluation of the data in the case study. All questions are compulsory. (35 marks)	25%
Paper 2 (2 hours) Section A (40 marks) is made up of short-answer and data-based questions. Section B (20 marks) requires students to answer one structured essay question from a choice of two. Each question is worth 20 marks. (60 marks)	50%
Internal assessment (10 hours)	25%
This component is internally assessed by the teacher and externally moderated by the IB at the end of the course. The internal assessment consists of one task: the individual investigation. (30 marks)	

Higher Level

Assessment component	Weighting
External assessment (4.5 hours)	80%
Paper 1 (2 hours) Students will be provided with a range of data in a variety of forms relating to a specific, previously unseen case study. Questions will be based on the analysis and evaluation of the data in the case study. All questions are compulsory. (70 marks)	30%
Paper 2 (2.5 hours) Section A (40 marks) is made up of short-answer and data-based questions. Section B (40 marks) requires students to answer two structured essay questions from a choice of three. Each question is worth 20 marks. (80 marks)	50%
Internal assessment (10 hours)	20%
This component is internally assessed by the teacher and externally moderated by the IB at the end of the course. The internal assessment consists of one task: the individual investigation. (30 marks)	

What makes a good student of Environmental Sciences and Societies?

The student wanting to study the discipline should have a natural flair and commitment towards environmental issues. They should also have the ability to think creatively and inventively when tackling environmental issues.

How can studying Environmental Sciences and Societies help me develop?

The general characteristics listed above and highly valued in all spheres of society are not just used by research academics but are invaluable skills to financiers, industrialists and politicians.

What career options does Environmental Systems and Societies give me?

ESS is an important qualification for many careers. Students who go on to study environmental sciences or geography at university could venture towards establishing a career in a growing and vibrant discipline that is related to many aspects of our day-to-day life. ESS is also relevant to many disciplines such as business and economics due to the growing importance of environmental systems in shaping business and economic decisions in both the private and public sectors.

COMPUTER SCIENCE – HIGHER AND STANDARD LEVEL

Introduction

We are living in the digital age; where computers are an integral part of every aspect of modern life. From shopping to playing games and even experiencing virtual reality trips to the moon, there is now an app for everything. All those systems were created by computer science graduates.

The most important aspect of computer science is problem solving, an essential skill for life that builds the capacity of individuals and enables them to become the producers of technology instead of just being the consumers. It's an exciting and constantly evolving field with virtually unlimited growth where the theory, design, programming, development and analysis of software, hardware and networks are studied to serve the purpose of solving real world problems in a variety of business, scientific and social contexts whether locally or globally.

Course Aims

1. Design, model and implement solutions to local and global problems.
2. Acquire and apply a body of knowledge, methods, tools, and techniques that characterise computer science.
3. Develop a conceptual approach to knowledge and understandings.
4. Develop an appreciation of the possibilities and limitations of computer science.
5. Develop a willingness and resilience to approach unfamiliar situations and real world problems.
6. Develop the ability to analyse, evaluate and synthesise information and claims relating to technological systems.
7. Develop the ability to evaluate the impact of emerging technologies on a range of stakeholders.
8. Develop awareness/understanding of the environmental, economic, cultural, ethical and social impact of computational solutions.
9. Understand computer science as an iterative and creative process.
10. Understand decisions must be justified objectively.
11. Develop solutions to meet the requirements of clients, users and systems.
12. Develop a critical awareness/understanding of threats to computer systems and their countermeasures.
13. Communicate knowledge and ideas effectively.
14. Work collaboratively.
15. Abstract a problem to solve, reuse code to develop new solutions and develop reusable code.

Content

	Systems in theory	Systems in practice	Systems in context
Abstraction	**SL:** - Computational thinking SDLC overview Planning and analysis -Operating systems -Fundamentals of computer systems HL: -Network organisation	**SL:** -Thinking computationally -Data types and Data structures	**SL:** -Introduction to systems **HL:** -Networks [5 hours]
Design	**SL:** -Software design **HL:** -Network security design	**SL:** -Software modelling	**SL:** -Analysis of systems design
Development	**SL:** -Fundamentals of program development -OOP principles -Development tactics **HL:** -Databases -Theory of ADTs	**SL:** -Development of software -Programming with objects -Development strategies **HL:** -Application of databases -Application of ADTs	**SL:** -Usability and accessibility -System documentation
Evaluation	**HL:** Vulnerabilities	**SL:** -Beta testing -Evaluating and maintaining the system	**SL:** -Impacts of emerging technology on society **HL:** -Real world vulnerabilities

Course Assessment

External assessment details – SL
Paper 1: 40%
• Section A: Several short answer and extended response questions combining core materials in Systems in theory and Systems in practice.
• Section B: One extended response question (from a choice of two options) on core materials including written code. Option 1 will require students to read and write code in Java. Option 2 will require students to read and write code in Python. The questions will otherwise be identical.

Paper 2: 30%
• Section A: Several short answer and extended response questions combining the core material in Systems in theory and Systems in practice, and Systems in theory and Systems in context.
• Section B: One structured question which has a technology context. The structure of this paper and the questions are similar from one examination to the next. The context is changed for each examination session.

External assessment details – HL
Paper 1: 40%
• Section A: Several short answer and extended response questions combining core and AHL materials in Systems in theory and Systems in practice.
• Section B: One extended response question (from a choice of two options) on core and AHL materials including written code. Option 1 will require students to read and write code in Java. Option 2 will require students to read and write code in Python. The questions will otherwise be identical.

Paper 2: 40%
• Section A: Several short answer and extended response questions combining the core and AHL material in Systems in theory and Systems in practice, and Systems in theory and Systems in context.
• Section B: One structured question which has a technology context. The structure of this paper and the questions are similar from one examination to the next. The context is changed for each examination session.

Common internal assessment details – SL and HL
IA component: 30% SL, 20% HL
• Individual computational solution development project
• The IA is assessed against 4 criteria:
A: Planning
B: Systems design overview
C: Development
D: Evaluation
• Group 4 project: Guidelines as per common group 4 project

What makes a good student of Computer science?

Computer science students are logical thinkers, risk-takers, persistent, have strong ICT skills, can pay attention to details and are able to cope with deadline pressure and teamwork.
They enjoy being able to solve challenging problems and are continuously looking for ways to use technology creatively to increase productivity.
They have the desire to learn languages to communicate with computers and are passionate about experimenting with the latest technologies.
Furthermore, students who enjoyed any of the Coding courses offered in the MYP years such as; Game development with Scratch, Web Design or Android Apps development, would make the perfect candidates for the course.

How can studying Computer science help me develop?

Computer science enables students to model, analyse, discover, and create systems to address highly complex problems. It facilitates and empowers us to innovate, explore and acquire further knowledge and skills.
Through the use of the Software Development Life Cycle (SDLC), students will learn how to build software that meet clients' expectations, function according to formal specifications and adhere to development and maintenance costs.

What career options does Computer science give me?

With computer technologies playing an ever growing role in all aspects of modern life, you're likely to find your computer science skills in high demand across many different industries. These include: financial organizations, management consultancy firms, software houses, communications companies, data warehouses, multinational companies (IT-related, financial services and others), governmental agencies, universities and hospitals.
Some other potential career options include becoming a software engineer and programmer, business intelligence analyst or a database administrator.
At the bottom line, whether you want to work for a big corporation managing networks and designing software or become the next tech entrepreneur, the IB Computer science course will open up a world of possibilities.

GROUP 5 MATHEMATICS

Kindly note that the Mathematics Group subject courses are currently undergoing curriculum review. The following information represents what the IB has released thus far, at the time of publication, about the new course structures. However, all the below should be considered as a work in progress and may or may not reflect the material which will finally appear in the courses.

The Diploma Mathematics courses aim to contribute to students' personal attributes, subject understanding and global awareness by enabling them to:

1. develop a curiosity and enjoyment of mathematics, and appreciate its elegance and power
2. develop an understanding of the concepts, principles and nature of mathematics
3. communicate mathematics clearly, concisely and confidently in a variety of contexts
4. develop logical and creative thinking, and patience and persistence in problem solving to instill confidence in using mathematics
5. employ and refine their powers of abstraction and generalization
6. take action to apply and transfer skills to alternative situations, to other areas of knowledge and to future developments in their local and global communities
7. appreciate how developments in technology and mathematics influence each other
8. appreciate the moral, social and ethical questions arising from the work of mathematicians and its applications
9. appreciate the universality of mathematics and its multicultural, international and historical perspectives
10. appreciate the contribution of mathematics to other disciplines, and as a particular "area of knowledge" in the TOK course
11. develop the ability to reflect critically upon their own work and the work of others
12. independently and collaboratively extend their understanding of mathematics

MATHEMATICS: ANALYSIS AND APPROACHES – HIGHER LEVEL AND STANDARD LEVEL

Introduction

This course appropriate for students who enjoy developing their mathematics to become fluent in the construction of mathematical arguments and develop strong skills in mathematical thinking. They will also be fascinated by exploring real and abstract applications of these ideas, with and without the use of technology. Students who take Mathematics: Analysis and approaches will be those who enjoy the thrill of mathematical problem solving and generalization. This subject is aimed at students who will go on to study subjects with substantial mathematics content such as mathematics itself, engineering, physical sciences, or economics for example.

Course Details

The number and algebra SL looks at: scientific notation, arithmetic and geometric sequences and series and their applications including financial applications, laws of logarithms and exponentials, solving exponential equations, simple proof, approximations and errors, and the binomial theorem. The number and algebra HL looks at: permutations and combinations, partial fractions, complex numbers, proof by induction, contradiction and counter-example, and solution of systems of linear equations.

The functions SL looks at: equations of straight lines, concepts and properties of functions and their graphs, including composite, inverse, the identity, rational, exponential, logarithmic and quadratic functions. Solving equations both analytically and graphically, and transformation of graphs. The functions HL looks at: the factor and remainder theorems, sums and products of roots of polynomials, rational functions, odd and even functions, self-inverse functions, solving function inequalities and the modulus function.
The geometry and trigonometry SL looks at: volume and surface area of 3d solids, right-angled and non-right-angled trigonometry including bearings and angles of elevation and depression, radian measure, the unit circle and Pythagorean identity, double angle identities for sine and cosine, composite trigonometric functions, solving trigonometric equations. The geometry and trigonometry HL looks at: reciprocal trigonometric ratios, inverse trigonometric functions, compound angle identities, double angle identity for tangent, symmetry properties of trigonometric graphs, vector theory, applications with lines and planes, and vector algebra.
The statistics and probability SL looks at: collecting data and using sampling techniques, presenting data in graphical form, measures of central tendency and spread, correlation, regression, calculating probabilities, probability diagrams, the normal distribution with standardization of variables, and the binomial distribution. The statistics and probability HL looks at: Bayes theorem, probability distributions, probability density functions, expectation algebra.
The calculus SL looks at: informal ideas of limits and convergence, differentiation including analysing graphical behaviour of functions, finding equations of normals and tangents, optimisation, kinematics involving displacement, velocity, acceleration and total distance travelled, the chain, product and quotient rules, definite and indefinite integration. The calculus HL looks at: introduction to continuity and differentiability, convergence and divergence, differentiation from first principles, limits and L'Hopital's rule, implicit differentiation, derivatives of inverse and reciprocal trigonometric functions, integration by substitution and parts, volumes of revolution, solution of first order differential equations using Euler's method, by separating variables and using the integrating factor, Maclaurin series.

Course Assessment

External
Mathematics: Analysis and approaches SL will be assessed with two written papers. Each paper will consist of a section A (short questions) and a section B (long questions). Paper 1 will be without the use technology and paper 2 will allow the use of a graphical calculator.

Assessment Outline – Standard Level

Assessment component	Weighting
External assessment (3 hours)	**80%**
Paper 1 (90 minutes) No technology allowed. (80 marks) *Section A* Compulsory short-response questions based on the syllabus. *Section B* Compulsory extended-response questions based on the syllabus.	**40%**
Paper 2 (90 minutes) Technology required. (80 marks) *Section A* Compulsory short-response questions based on the syllabus. *Section B* Compulsory extended-response questions based on the syllabus	**40%**
Internal assessment 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 investigating an area of mathematics. (20 marks)	**20%**

Assessment Outline – Higher Level

Assessment component	Weighting
External assessment (5 hours)	**80%**
Paper 1 (120 minutes)	
No technology allowed. (110 marks)	**30%**
Section A	
Compulsory short-response questions based on the syllabus.	
Section B	
Compulsory extended-response questions based on the syllabus.	
Paper 2 (120 minutes)	**30%**
Technology required. (110 marks)	**20%**
Section A	
Compulsory short-response questions based on the syllabus.	
Section B	
Compulsory extended-response questions based on the syllabus.	
Paper 3 (60 minutes)	
Technology required. (55 marks)	
Two compulsory extended response problem-solving questions.	
Internal assessment	**20%**
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 investigating an area of mathematics. (20 marks)	

MATHEMATICS: APPLICATIONS AND INTERPRETATION – HIGHER AND STANDARD LEVEL

Introduction

This course is appropriate for students who are interested in developing their mathematics for describing our world and solving practical problems. They will also be interested in harnessing the power of technology alongside exploring mathematical models. Students who take Mathematics: Applications and interpretation will be those who enjoy mathematics best when seen in a practical context. This subject is aimed at students who will go on to study subjects such as social sciences, natural sciences, statistics, business, some economics, psychology, and design, for example.

Course Details

The number and algebra SL looks at: scientific notation, arithmetic and geometric sequences and series and their applications in finance including loan repayments, simple treatment of logarithms and exponentials, simple proof, approximations and errors. The number and algebra HL looks at: laws of logarithms, complex numbers and their practical applications, matrices and their applications for solving systems of equations, for geometric transformations, and their applications to probability.
The functions SL looks at: creating, fitting and using models with linear, exponential, natural logarithm, cubic and simple trigonometric functions. The functions HL looks at: use of log-log graphs, graph transformations, creating, fitting and using models with further trigonometric, logarithmic, rational, logistic and piecewise functions.

The geometry and trigonometry SL looks at: volume and surface area of 3d solids, right-angled and non-right-angled trigonometry including bearings, surface area and volume of composite 3d solids, establishing optimum positions and paths using Voronoi diagrams. The geometry and trigonometry HL looks at: vector concepts and their applications in kinematics, applications of adjacency matrices, and tree and cycle algorithms.

The statistics and probability SL looks at: collecting data and using sampling techniques, presenting data in graphical form, measures of central tendency and spread, correlation using Pearson's product-moment and Spearman's rank correlation coefficients, regression, calculating probabilities, probability diagrams, the normal distribution, Chi-squared test for independence and goodness of fit. The statistics and probability HL looks at: the binomial and Poisson distributions, designing data collection methods, tests for reliability and validity, hypothesis testing and confidence intervals.
The calculus SL looks at: differentiation including analysing graphical behavior of functions and optimisation, using simple integration and the trapezium/trapezoidal rule to calculate areas of irregular shapes. The calculus HL looks at: kinematics and practical problems involving rates of change, volumes of revolution, setting up and solving models involving differential equations using numerical and analytic methods, slope fields, coupled and second-order differential equations in context.

Course Assessment

External
Mathematics: Applications and interpretation SL will be assessed with two written papers both of which will require the use of the technology in the form of a graphical calculator. Paper 1 will consist of short questions and paper 2 will consist of longer questions.

Assessment Outline – Standard Level

Assessment component	Weighting
External assessment (3 hours)	**80%**
Paper 1 (90 minutes) Technology required. (80 marks) Compulsory short-response questions based on the syllabus. (80 marks)	**40%**
Paper 2 (90 minutes) Technology required. (80 marks) Compulsory extended-response questions based on the syllabus. (80 marks)	**40%**
Internal assessment 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 investigating an area of mathematics. (20 marks)	**20%**

Assessment Outline – Higher Level

Assessment component	Weighting
External assessment (5 hours)	**80%**
Paper 1 (120 minutes) Technology required. (110 marks) Compulsory short-response questions based on the syllabus.	**30%**
Paper 2 (120 minutes) Technology required. (110 marks) Compulsory extended-response questions based on the syllabus.	**30%**
Paper 3 (60 minutes) Technology required. (55 marks) Two cumpulsory extended response problem-solving questions.	**20%**
Internal assessment 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 investigating an area of mathematics. (20 marks)	**20%**

VISUAL ARTS – HIGHER AND STANDARD LEVEL

Introduction

The Visual Arts are an integral part of everyday life, permeating all levels of human creativity, expression, communication and understanding. They range from traditional forms embedded in local and wider communities, societies and cultures, to the varied and divergent practices associated with new, emerging and contemporary forms of visual language. They may have socio-political impact, as well as ritualistic, spiritual, decorative and functional value; they can be persuasive and subversive in some instances, enlightening and uplifting in others. We celebrate the Visual Arts not only in the way we create images and objects, but also in the way we appreciate, enjoy, respect and respond to the practices of art-making by others from around the world. Theories and practices in Visual Arts are dynamic and ever-changing, and connect many areas of knowledge and human experience through individual and collaborative exploration, creative production and critical interpretation.

Course Aims

- Develop students' knowledge, understanding and critical awareness of the Visual Arts;
- Promote the Visual Arts as a means for expressing personal, socio-cultural and aesthetic experiences and ideas;
- Develop students' practical skills in the use of a variety of media and techniques;
- Develop intellectual skills of inquiry;
- Create opportunities for students to explore personal and cultural identity through individual and collaborative study; and
- Embrace and celebrate cultural values and differences through critical and contextual awareness of Visual Art practices and traditions.

Course Assessment

External assessment tasks—SL and HL
Part 1: Comparative Study (20%)
Students at both SL and HL must examine and compare at least three pieces, at least two of which should be by different artists. It is valuable for students to have experienced at least one of the works in real time and space, such as a painting at a gallery, a sculpture in a park or an artefact from the local community that is brought into the school, although this is not essential. Good quality reproductions can be utilized when a student's location limits his/her direct access to such works. The works selected for comparison and analysis should come from contrasting cultural contexts.

Part 2: Process Portfolio (40%)
Students at SL and HL submit carefully selected materials which demonstrate their experimentation, exploration, manipulation and refinement of a variety of Visual Arts activities during the two-year course. The work, which may be extracted from their Visual Arts journal and other sketch books, notebooks, portfolios and so on, will have led to the creation of both resolved and unresolved works. The selected process portfolio work should show evidence of their technical accomplishment during the Visual Arts course and an understanding of the use of materials, ideas and practices appropriate to visual communication. They should be carefully selected to match the requirements of the assessment criteria at the highest possible level.

The work selected for submission should show how students have explored and worked with a variety of techniques, effects and processes in order to extend their art-making skills base. This will include focused, experimental, developmental, observational, skill-based, reflective, imaginative and creative experiments which may have led to refined outcomes.

Part 3: Exhibition (40%)
Students at SL and HL submit for assessment a selection of resolved artworks for their exhibition. The selected pieces should show evidence of their technical accomplishment during the Visual Arts course and an understanding of the use of materials, ideas and practices to realize their intentions. Students also evidence the decision-making process which underpins the selection of this connected and cohesive

What makes a good student of the Visual Arts?

We look for these qualities in a student:
• The ability to work independently;
• Open mindedness and an appreciation of diverse art forms and cultures;
• Commitment to completing all aspects of the course fully including home study, which will be vital to successfully completing project work;
• A willingness to take risks in pursuit of creative and imaginative work; and
• Self-motivation and good organisational skills to ensure ideas are fully developed from initial planning to a finished outcome.

How can studying Visual Arts help me develop?

The IB Visual Arts course aims to develop the student through their study and practice of art, both as a person and a world citizen, equipping them with problem-solving abilities that extend beyond the traditional skills of manual dexterity and hand-to-eye coordination.

The study of Visual Arts can help students develop:
- Intellectual inquiry, communication and reasoning skills;
- Cultural awareness and appreciation;
- Manual dexterity; and
- Self-awareness and confidence.

What career options does Visual Arts give me?

A qualification in Visual Arts can provide a foundation for numerous careers, some directly associated with Visual Art and others utilising the numerous transferable skills that are developed through the study of Visual Art. Many students use their Visual Arts qualification to gain entry to specialised courses; others choose to pursue the study of Visual Art to the highest level with the intention of becoming professional artists in their own right.

Here are a few examples of career possibilities: Media, Marketing and Advertising; Theatre, TV and Film Industry; Exhibition Management and Curating, as well as Restoration and Management; Design, including Graphic Design, Interior Design, Industrial Design, Landscape Design, Furniture Design and Fashion Design, and Engineering or Architecture.