

Subject Descriptors and Aims 2008

This document is of particular relevance to students entering year 10 and should be also used by students entering year 11 for subject descriptions

IB Mission Statement

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

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

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

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<i>IB learner profile</i>	
IB programmes aim to develop internationally minded people who are striving to become:	
Inquirers	Their natural curiosity is nurtured. They acquire the skills necessary to conduct constructive inquiry and research, and become independent active learners. They actively enjoy learning and this love of learning will be sustained throughout their lives.
Knowledgeable	They explore concepts, ideas and issues which have global relevance and importance. In so doing, they acquire, and are able to make use of, a significant body of knowledge across a range of disciplines
Critical thinkers	They exercise initiative in applying thinking skills critically and creatively to approach complex problems and make reasoned decisions.
Communicators	They understand and express ideas and information confidently and creatively in more than one language and in a variety of modes of communication.
Risk-takers	They approach unfamiliar situations with confidence and forethought, and have the independence of spirit to explore new roles, ideas and strategies. They are courageous and articulate in defending those things in which they believe.
Principled	They have a sound grasp of the principles of moral reasoning. They have integrity, honesty, a sense of fairness and justice and respect for the dignity of the individual.
Caring	They show empathy, compassion and respect towards the needs and feelings of others. They have a personal commitment to action and service to make a positive difference to the environment and to the lives of others
Open-minded	Through an understanding and appreciation of their own culture, they are open to the perspectives, values and traditions of other individuals and cultures and are accustomed to seeking and considering a range of points of view.
Well-balanced	They understand the importance of physical and mental balance and personal well-being for themselves and others. They demonstrate perseverance and self-discipline.
Reflective	They give thoughtful consideration to their own learning and personal development. They are able to analyse their strengths and weaknesses in a constructive manner.

The IB Learner Profile details the **desirable attributes** for an IB student to acquire as they experience and progress through their Diploma studies.

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Introduction

The International Baccalaureate Diploma is a highly regarded, internationally recognised certification leading to tertiary study anywhere in the world. It is part of the philosophy of the IB Diploma that all students study a traditional, broadly focused curriculum with the study of languages, maths, science and humanities being compulsory for all students.

Founded in the 1960s, the International Baccalaureate Organisation (IBO) evolved from an international effort by schools to establish a common curriculum and university entry credential for geographically mobile students. The IB Diploma now has wide acceptance and is held in high esteem throughout the world. It is a two year program in the final secondary years of education, designed to:

- prepare students for tertiary studies;
- provide students with a balanced education;
- foster critical thinking skills
- encourage cultural understanding and tolerance
- enable students to move between countries and cultures without affecting their education;
- develop international awareness and broadened perspectives

A student who is awarded the IB Diploma has demonstrated a strong commitment to learning, both in terms of mastery of the subject content and in the development of the skills and discipline necessary for success in a competitive world. IB Diploma students enjoy ready acceptance and success in university studies in Queensland and throughout the world.

Who is the IB Diploma for?

The IB would be a good choice of program for any student who wishes to study at a University and is interested in:

- studying a sound comprehensive curriculum recognised for both depth and breadth of academic studies
- participating in activities that encourage a sense of adventure, self-discovery, social responsibility and international awareness

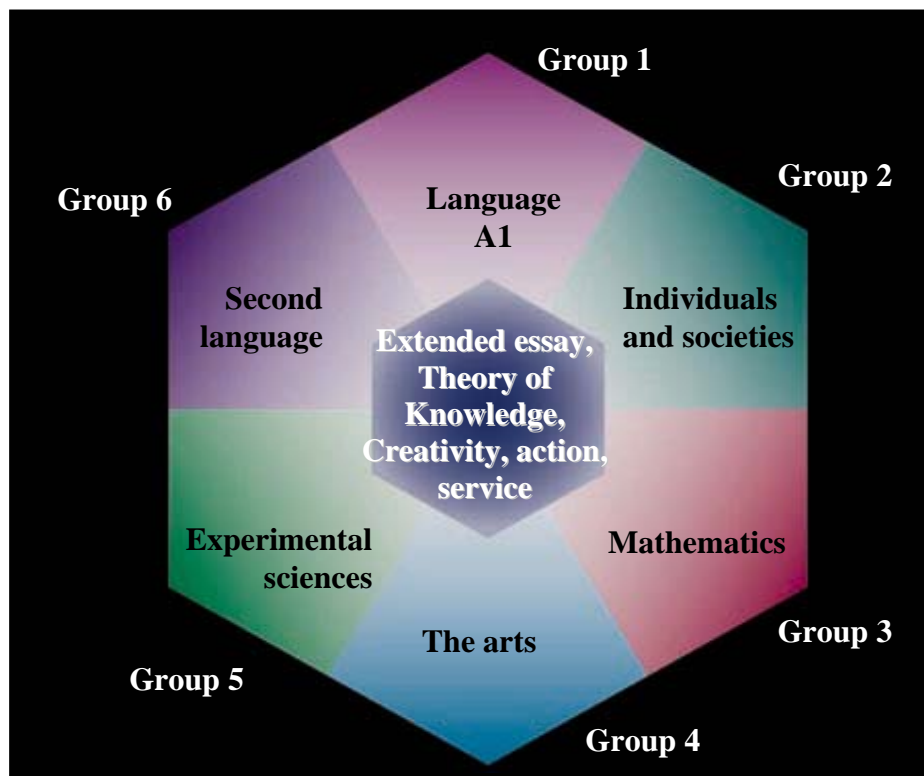
The IB Diploma Program

To be eligible for the award of the IB Diploma, students are required to:

- Study six academic subjects, one from each of the groups represented by the hexagon below (exceptions for group 6 apply)
- Complete at least three (and not more than four) of these at the Higher Level and the remainder at the Standard Level;
- Satisfactorily complete the following additional core requirements:

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- Theory of Knowledge (ToK)
- Extended Essay (EE)
- Creativity, Action and Service (CAS)



The Award of the IB Diploma

The award of the Diploma requires:

- A minimum total of 24 points (with a maximum of 45 points possible); and
- The satisfactory completion of the Extended Essay, ToK and CAS; and
- The completion of one subject from each of the six groups with at least three, and not more than four, of the subjects at Higher Level (HL) and the others at Standard Level (SL)

Curriculum Offerings for 2008

International Baccalaureate Diploma Framework

The Academy's three year learning program will have as its essential core, the International Baccalaureate Diploma. This core has a traditional timeframe of two years. The ability to accelerate studies allows for some subjects to be

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completed in 18 months. Year 10 students will begin the IBDP in term 4 of Year 10.

IB Diploma Facet	Year 11	Year 10
Group 1 English as First Language	English	English
Group 2 Second Language	To be decided by consultation Language Ab Initio Language Standard Level Language Higher Level	To be decided by consultation
Group 3 Individuals and Society	Business and Management Information Technology in a Global Society Psychology	Introduction to Business and Management Introduction to Information Technology in a Global Society Introduction to Psychology
Group 4 Experimental Sciences	Biology Chemistry Physics	Students choose two of: Biology Chemistry Physics
Group 5 Mathematics	Mathematics Studies Standard Level Mathematics Standard Level Mathematics Higher Level	Introduction to Mathematics Studies Standard Level Introduction to Mathematics Standard Level Introduction Mathematics Higher Level
Group 6 Arts or Second Science Option	Students cannot choose a science previously chosen in Group 4	
	Music Biology Chemistry Physics	Music Biology Chemistry Physics
Core All compulsory	Extended Essay (4000 word original research paper) (EE) Theory of Knowledge (TKK) Creativity, Action and Service (CAS)	Introduction to Theory of Knowledge (TOK) Creativity, Action and Service (CAS)

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Subject Descriptors

English

The English programme is primarily a pre-university course in literature. It is aimed at students who intend to pursue literature, or related studies at university as well as at students whose formal study of literature will not continue beyond this level.

Literature is concerned with our conceptions, interpretations and experiences of the world. The study of literature, therefore, can be seen as a study of all the complex pursuits, anxieties, joys and fears that human beings are exposed to in the daily business of living. It enables an exploration of one of the more enduring fields of human creativity and artistic ingenuity, and provides immense opportunities for encouraging independent, original, critical and clear thinking.

The English Language A1 programme encourages students to see literary works as products of art and their authors as craftsmen whose methods of production can be analysed in a variety of ways and on a number of levels. This is achieved through the emphasis placed on exploring the means used by different authors to convey their subjects in the works studied. It is further reinforced by the comparative framework emphasized for the study of these works in all parts of the programme.

Language Ab Initio

The language ab initio courses are language learning courses for beginners, designed to be followed over two years by students who have **no previous experience** of learning the target language. The main focus of the courses is on the acquisition of language required for purposes and situations usual in everyday social interaction. Language ab initio courses are only available at standard level.

Language Standard and Higher Level

The language standard and higher level courses are language learning courses for students with **previous experience** of learning the target language. The main focus of these courses is on language acquisition and the development of skills considerably beyond those expected of an ab initio candidate, up to a fairly sophisticated degree at higher level.

Language standard and higher level courses give students the opportunity to reach a high degree of competence in a language and explore the culture(s) using the language. The range of purposes and situations for which and in which the language is used extends well beyond those at ab initio, to the domains of work, social relationships, and the discussion of abstract ideas, for example. The types of language needed for these purposes and situations are more refined.

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Business and Management

Business and Management is a rigorous and dynamic discipline that examines business decision making processes and how these decisions impact on and are affected by internal and external environments. It is the study of both the way in which individuals and groups interact in an organisation and of the transformation of resources.

The Diploma Program Business and Management course is designed to develop an understanding of business theory, as well as an ability to apply business principles, practices and skills. Emphasis is placed on strategic decision making and the day to day business functions of marketing, production, human resource management and finance.

The Business and Management course aims to help students understand the implications of business activity in a global market. It is designed to give students an international perspective of business and to promote their appreciation of cultural diversity through the study of topics like international marketing, human resource management, growth and business strategy.

The ideals of international cooperation and responsible citizenship are at the heart of Diploma Program Business and Management. The course encourages the appreciation of ethical concerns and issues of social responsibility in the global business environment. Students should be able to make sense of the forces and circumstances that drive and restrain change in an interdependent and multicultural world. The Business and Management course will contribute to students' development as critical and effective participants in local and world affairs.

Information Technology in a Global Society

The Diploma Program Information Technology in a Global Society (ITGS) course is the study and evaluation of the impact of information technology (IT) on individuals and society. It explores the advantages and disadvantages of the use of digitized information at the local and global level. ITGS provides a framework for the student to make informed judgments and decisions about the use of IT within social contexts.

Students come into contact with IT on a daily basis because it is so pervasive in the world in which we live. This widespread use of IT inevitably raises important questions about social and ethical issues that shape our society today. ITGS offers an opportunity for a systematic study of these issues, whose range is such that they fall outside the scope of any other single discipline.

The nature of the subject is defined by the use of fundamental ITGS terms:

Information technology is the acquisition, processing, storage, manipulation and dissemination of digital information by computing or telecommunications or a combination of both.

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Social impact includes the economic, political, cultural, legal, environmental, ergonomic, health and psychological effects of IT on human life.

Ethical considerations refer to the responsibility and accountability of those involved in the design, implementation and use of IT.

An information system is a collection of people, information technologies, data, methods and policies organized to accomplish specific functions and solve specific problems.

Psychology

Psychology is most appropriately defined as the systematic study of behaviour and experience.

In recent years great attention has been given to cultural variables to study the diversity of human behaviour in a more comprehensive way. Whatever their background or methodology, psychologists employ rigorous procedures throughout the research process, utilizing their findings for the possible improvement of individual life, as well as for the understanding of social conditions that affect the individual.

The rapid increase in globalization and the use of technology calls for greater insights into how individuals interpret meanings, relationships and health. Psychology addresses these complex issues so that students can develop a greater understanding of themselves and others. It therefore offers the opportunity to focus on individuals and societies in the context of a social science, which is an integral part of the Diploma Program.

Biology

Biologists have accumulated huge amounts of information about living organisms, and it would be easy to confuse students by teaching large numbers of seemingly unrelated facts. In the Diploma Program Biology course, it is hoped that students will acquire a limited body of facts and, at the same time, develop a broad, general understanding of the principles of the subject.

There are four basic biological concepts that run throughout:

Structure and function

Students should appreciate that structures permit some functions while, at the same time, limiting others.

Universality versus diversity

Universal features exist in a biological world of enormous diversity. Species exist in a range of habitats and show adaptations that relate structure to function.

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Equilibrium within systems

Checks and balances exist both within living organisms and within ecosystems. The state of dynamic equilibrium is essential for the continuity of life.

Evolution

The concept of evolution draws together the other themes. It can be regarded as change leading to diversity within constraints, and this leads to adaptations of structure and function.

Chemistry

Chemistry is an experimental science that combines academic study with the acquisition of practical and investigational skills. It is 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.

The Diploma Program Chemistry course includes the essential principles of the subject but also, through selection of options, allows teachers some flexibility to tailor the course to meet the needs of their students. The course is available at both higher level and standard level, and therefore accommodates students who wish to study science in higher education and those who do not.

Physics

Physics is the most fundamental of the experimental sciences, as it seeks to explain the universe itself, from the very smallest particles – quarks (perhaps 10^{-17}m in size), which may be truly fundamental – to the vast distances between galaxies (10^{24}m).

Despite the exciting and extraordinary development of ideas throughout the history of physics, certain things have remained unchanged. Observations remain essential at the very core of physics, and this sometimes requires a leap of imagination to decide what to look for. Models are developed to try to understand the observations, and these themselves can become theories that attempt to explain the observations. Theories are not directly derived from the observations but need to be created. These acts of creation can sometimes compare to those in great art, literature and music, but differ in one aspect that is unique to science:

the predictions of these theories or ideas must be tested by careful experimentation. Without these tests, a theory is useless. A general or concise statement about how nature behaves, if found to be experimentally valid over a wide range of observed phenomena, is called a law or a principle.

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The scientific processes carried out by the most eminent scientists in the past are the same ones followed by working physicists today and, crucially, are also accessible to students in schools.

At the school level both theory and experiments should be undertaken by all students. They should complement one another naturally, as they do in the wider scientific community.

The course includes:

Core: Physics and physical measurement; mechanics; thermal physics; oscillations and waves; electric currents, fields and forces; atomic and nuclear physics; energy, power and climate change.

HL: Motion in fields; quantum physics and nuclear physics; digital technology.

Options: Relativity and particle physics.

Mathematics

MSSL Mathematics Studies Standard Level

MSL Mathematics Standard Level

MHL Mathematics Higher Level

MSSL is the least demanding and until recently the most popular course. It is similar in difficulty to Maths A. Students need to be aware that not all universities recognise it as a maths pre-requisite.

MMSL is an introduction-to-calculus type course, equivalent to Maths B-C. It is for students who need a fairly rigorous mathematics foundation for their chosen field of study, typically in sciences or business type studies.

MHL is a demanding course (equivalent Maths C and first year university level). It is for students with a great interest in mathematics or who wish to pursue university studies in engineering, sciences or mathematics.

Music

The art of music demands that the educated musician and music lover be able to recognise and articulate musical elements realised in diverse examples of music making. A vibrant musical education fosters curiosity in, and sensitivity to, the musical worlds which surround us. The alert mind trained in the disciplined study of music will appreciate the ways in which music integrates and manifests knowledge on multiple levels. With careful listening, the musician may become humbled by the power of music to change lives.

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What does the study of music entail? We learn to hear pitch in sound and pattern in rhythm. We learn to hear the unfolding of sonic structures as parts repeat and transform themselves. We learn to listen and look for distinctions and beauty. We learn to be surprised, moved and inspired by the similarities and differences in music. We learn to hear the correlation between phrasing in music and phrasing in the living of our lives. We learn to accept the power of music over us. We learn to allow music to point to beauty beyond ourselves, in the presence of which we may feel exalted or consoled, uplifted or fortified.

Higher Level

This is designed for the specialist music student with a background in musical performance and composition, who may pursue music at university or conservatoire level.

- Musical Perception and Analysis
- Solo Performance: voice or instrument, **one** or **more** recitals
- Composition: **three** contrasting compositions

Standard Level

Solo Performance Option (SLS)

This is designed for the student who has a background in musical performance.

- Musical Perception and Analysis
- Solo Performance: voice or instrument, **one** or **more** recitals

Group Performance Option (SLG)

This is designed for students with a general interest in music, or those without prior experience, particularly members of ensembles.

- Musical Perception and Analysis
- Group Performance: **two** or **more** public performances

Composition Option (SLC)

This is designed for the student who has a background in musical composition.

- Musical Perception and Analysis
- Composition: **two** contrasting compositions

Musical Perception and Analysis

This part of the syllabus is common to all four programs and consists of:

- Study of Prescribed Work
- Study of Musical Genres and Styles
- Musical Investigation

Core Requirements of the International Baccalaureate Diploma Programme

All IB Diploma students must satisfy the following three core requirements in addition to their six chosen academic subjects:

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Theory of Knowledge (ToK)

This subject explores the relationship between the various subject disciplines, ensuring the students engage in analysis and critical reflection of the knowledge acquired, within and beyond the classroom.

Extended Essay (EE)

Students are required to undertake original research and write an extended essay of some 4,000 words. This offers the opportunity to investigate a topic of special interest and acquaints the student with the kind of independent research and writing skills expected in university level studies.

The topic arises from one of the six subjects studied by the student and the essay is completed under the supervision of an appropriate mentor.

Creativity, Action and Service (CAS)

The CAS requirement is a fundamental part of the IB Diploma curriculum, emphasising the importance of life outside the world of study. Participation in cultural, sports and community service activities enables students to share their special talents while developing awareness, concern and the ability to work cooperatively with others.